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FINAL REPORT

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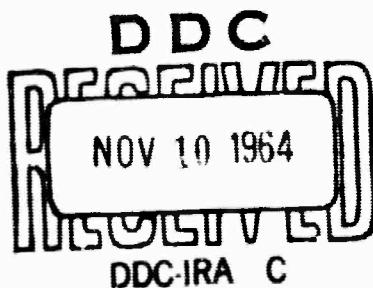
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FALLON, NEVADA
OCTOBER 26, 1963

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PRESHOT AND POSTSHOT STRUCTURE SURVEY
Holmes & Narver, Inc.

December 1963

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PRESHOT AND POSTSHOT STRUCTURE SURVEY

Project Shoal

**U. S. ATOMIC ENERGY COMMISSION
NEVADA OPERATIONS OFFICE**

Las Vegas, Nevada

Contract AT(29-2)-20

(Preshot and postshot survey of all structures
within 10 miles of Ground Zero, structures at
Salt Wells, and surface structures at mines
included in mine survey.)

December 1963

Atomic Test Support Organization

HOLMES & NARVER INC

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I. INTRODUCTION

A. Authority

This survey was conducted in accordance with the requirements of the Operational Safety Plan, Project Shoal, dated May 1963.

B. Scope

This report documents the preshot and postshot condition of all structures within 10 miles of Ground Zero (GZ), plus structures at Salt Wells and surface structures at mines that were included in the mine survey (see Final Report, Structural Survey of Private Mining Properties, Project Shoal, dated December 1963).

C. Purpose

The structures were surveyed in order to document, photographically and in writing, any physical changes resulting from the Shoal Event.

D. Summary

A detailed report covering each structure is contained in Appendix A. These reports include a statement of the preshot condition and comment on any physical changes observed. These included a report on 27 properties. Appendix B contains 321 preshot and postshot photographs, and Appendix C consists of a Project Shoal Vicinity Map.

II. SURVEY PROCEDURE

The preshot survey was made by a Holmes & Narver, Inc., structural engineer accompanied by either a surveyor or a representative of the U. S. Bureau of Mines familiar with the area. The postshot survey was made by the same Holmes & Narver, Inc., engineer.

Each structure was investigated and photographed on both surveys to record any physical change that might have occurred. Only a representative sample of the total number of photographs taken during the survey appears in Appendix B for all structures. Additional photographs are on file at the Holmes & Narver Las Vegas Office.

III. OBSERVATIONS

A trailer identified by Serial No. 2-4 had been removed from the location and was not present at shot time; therefore, no postshot photograph was taken. Another trailer which is identified by Serial No. 22-5 was burned down during the weekend of October 19, 1963, according to the owners. A detailed report of these changes is included in Appendix A. No other physical changes were observed.

IV. CONCLUSIONS

The structures surveyed included various residential structures, mine surface structures, and a windmill at distances of from three to 52 miles from GZ. No damage was observed and it can be concluded that for comparable future projects no damage would result to similar structures at comparable yields and ranges. It is further concluded that the survey procedures outlined in the Operational Safety Plan, Project Shoal, were adequate to accomplish the survey objectives.

APPENDIX A

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APPENDIX A

General Notes

Each property is identified by a basic serial number arbitrarily assigned. For example, "2" represents Salt Wells. Each important structure at that property is further identified by a number following; e.g. "2-2" is a residence at Salt Wells. All occupied structures are further identified by the name of the owner and/or occupant. The description following the notation AZ, when it appears in a report, is the bearing of a line normal to the front of a structure. This line was established to determine any movement of a structure after the event. Photographs of the structures appear in Appendix B. The photographs are labeled as preshot and postshot and dated. When more than one preshot and postshot photograph of a structure appears in this report, the basic serial number is followed by a photo number in parenthesis; e.g. 3-1 (1).

The structures are located by coordinates based on the Nevada State Grid System and by an approximate direction and distance from GZ. Each structure or group of structures is shown on the map, which is enclosed as Appendix C, and is identified by the basic serial number.

List of Properties Surveyed

<u>Serial No.</u>	<u>Description</u>
1	Fallon Radio Range Station
2	Salt Wells
3	Frenchman Station
4	Windmill
5	Salt Mill
6	Winter Sheep Camp
7	Shack - Three Miles South of GZ
8	Tungsten Mill
9	Shack - Four Miles Northwest of GZ
10	Hoover Claims
11	Summit King Mines
12	Northern Dipper Mine
13	Dromedary Hump Mine
14	Aldona Mine
15	Ben Mathews Shaft
16	Red Top Mine
17	Red Ant West Mine
18	East End Mine
19	Mint Mine
20	Grutt Hill Mine
21	Nevada Sheelite Mine
22	Broken Hills Mine
23	Eagleville Mine
24	Robinson-Simkin Ace Claims
25	Happy Return Mine
26	Simon Mine
27	Buffalo Hump Mine

Individual Structure Reports

Serial No. 1 - Fallon Radio Range Station

Located 22 miles northwest from GZ at approximate coordinates N 1, 705, 000/E 478, 000.

A tower was not visible at the map location. Mr. W. B. Kearns, Chief, System Maintenance Sector, FAA, contacted on September 23, 1963, stated that the tower was dismantled during 1961. No photos were taken.

Serial No. 2 - Salt Wells

Owner is Mrs. Elizabeth Mathews and the property is leased to Mr. and Mrs. Cecil Williams. Located 16.4 miles northwest from GZ at approximate coordinates N 1, 684, 000/E 500, 000. Visited September 23 and October 26, 1963.

- 2-1 Restaurant and Bar (See photo 2-1) This is a 40 x 50-foot wood frame structure with a concrete masonry fireplace and chimney at the west end of the structure. This structure was built about 1955. No damage was noted as a result of the postshot survey.
- 2-2 Residence (See photo 2-2) This is a 30 x 30-foot three bedroom, wood frame structure that was built about 1956. No damage was noted as a result of the postshot survey.
- 2-3 Trailer (See photo 2-3) This is a 30-foot long x 8-foot wide aluminum-covered trailer. No damage was noted as a result of the postshot survey.
- 2-4 Road Crew Trailer (See photo 2-4) This temporary road crew trailer was on the property when it was visited on September 23, 1963, but had been removed when the property was visited on October 26, 1963.
- 2-5 Power, Pump and Storage Building (See photo 2-5) The westerly structure, on the left in the photos, was built about 1945. It is unpainted, but is otherwise in fair condition except for some

warping of the wood and a broken hinge on the west door. The easterly structure is under construction. No damage was noted as a result of the postshot survey.

Serial No. 3 - Frenchman Station

Owners are Edward and Helen Weyher. Located eight miles northeast from GZ at coordinates N 1,649,000/E 588,000. Visited September 23, October 8 and October 26, 1963.

3-1 Bar and Restaurant (See photos 3-1(1) through 3-1(10)) Bar and restaurant, wood frame and stucco structure. Stucco is generally covered with small cracks. The original structure was displaced from its foundations in 1954 by an earthquake. The original structure is of uncertain age, but it was completely rebuilt about 1957. The main room is a bar, restaurant, and gift shop with many shelves and counters upon which are glasses, bottles, gift items and other miscellaneous items. The walls and ceiling on the interior are covered with knotty pine paneling. The liquor storage room has cleated pine shelves and liquor stock for the bar. No damage was noted as a result of the postshot survey.

3-2 Garage (See photos 3-2(1) and 3-2(2)) 24 x 30-foot concrete block structure built about 1953. There are three gasoline pumps. There is a wood tower or platform structure supporting the T.V. antenna. This structure is roughly built of planks and boards. See photo 3-2(2). No damage was noted as a result of the postshot survey.

3-3 Motel (See photos 3-3(1) through 3-3(8)) This is a 30 x 60-foot concrete masonry structure built in 1955 and is in good condition except for several cracks in front concrete slab. AZ 157° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

3-4 Trailer (See photos 3-4(1) and 3-4(2)) This is a 25-foot long metal covered trailer. No damage was noted as a result of the postshot survey.

3-5 Pump house (See photos 3-5(1) through 3-5(4)) This is a 15 x 20-foot concrete masonry pump house built about 1953. AZ 254° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

Serial No. 4 - Windmill

Structure is four miles east of GZ. Coordinates are N 1,620,000/E 578,000. Visited September 23 and November 4, 1963.

4-1 Windmill Structure (See photos 4-1(1) and 4-1(2)) Windmill - braced and guyed wooden structure. Age uncertain, about 10 years. AZ 65° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

Serial No. 5 - Salt Mill

Owner is Fallon Development Co., Elmer J. Huckaby, Agent, Harrigan Road, Fallon, Nevada. Structure is located four miles east of GZ, at coordinates N 1,643,000/E 578,000. Visited September 23 and November 4, 1963.

5-1 Loading Bins and Ramp (See photos 5-1(1) and 5-1(2)) Consists of loading bins and ramp of wood construction. No damage was noted as a result of the postshot survey.

Serial No. 6 Winter Sheep Camp

Located four miles west of GZ, at coordinates N 1,622,000/E 536,000. Visited September 24 and October 30, 1963.

6-1 Shack (See photo 6-1) This structure is a 16 x 16-foot wood frame, corrugated sheet metal-covered shack. Roofing and siding are damaged and all windows have been removed. No damage was noted as a result of the postshot survey.

6-2 Shack (See photo 6-2) This shack is a 16 x 16-foot wood structure. It is unpainted and the boards of the siding are warped and badly weathered. No damage was noted as a result of the postshot survey.

Serial No. 7 - Shack

Located three miles south of GZ, at coordinates N 1,604,000/E 557,000. Visited September 24 and October 30, 1963.

7-1 Shack, Trailer and Outhouse (See photo 7-1) This 8 x 12-foot wood frame shack is covered with green mineral surfaced asphalt roll roofing. Also a 2-wheel small trailer and outhouse. No damage was noted as a result of the postshot survey.

Serial No. 8 - Tungsten Mill

Located five miles north northwest of GZ, at coordinates N 1,642,000/E 550,000. Visited September 25 and October 26, 1963.

8-1 Storage Bin and Foundations (See photo 8-1) Abandoned wood storage bin and concrete foundations. No damage was noted as a result of the postshot survey.

Serial No. 9 - Shack

Located four miles northwest of GZ, at coordinates N 1,635,000/E 544,000. Visited September 23 and November 4, 1963.

9-1 Shack (See photo 9-1) This 8 x 15-foot wood shack is about 40 years old and abandoned. Siding is unpainted, badly weathered and warped. Windows are all missing. Interior is completely gutted and floor is covered with trash. No damage was noted as a result of the postshot survey.

Serial No. 10 - Hoover Claims

Owner is Charles M. Hoover, 39 Nevada Street, Fallon, Nevada. This is an inactive gold mine which was being reactivated at the time of the postshot survey. Located five miles north of GZ, at coordinates N 1,645,000/E 563,000. Visited September 30 and October 29, 1963.

10-1 Cabin (See photo 10-1) A cabin which was on the site has recently burned down completely. No damage was noted as a result of the postshot survey.

10-2 Cabin (See photo 10-2) Abandoned wrecked cabin. Roof is completely missing and most of the walls have collapsed. No damage was noted as a result of the postshot survey.

10-3 Shack (See photo 10-3) This 16 x 20-foot shack is abandoned. Wood frame and wood and roofing felt covered, generally in dilapidated condition. Roof covering is entirely gone. Windows are missing, boards are warped and the roof structure sags. No damage was noted as a result of the postshot survey.

Serial No. 11 - Summit King Mine

Owner is Summit King Mines, Ltd., 320 Marine Building, 335 Burrard Street, Vancouver, B.C., Canada. This is an inactive gold mine located five miles north of GZ, at coordinates N 1,645,000/E 564,000. Visited September 30 and October 39, 1963.

11-1 Shack (See photo 11-1) This 10 x 20-foot abandoned shack is a dilapidated wood structure. Boards are warped and weatherbeaten. One side of shack is completely missing. No damage was noted as a result of the postshot survey.

11-2 Foundations (See photo 11-2) Concrete mill foundations - abandoned. Mill superstructure completely missing. No damage was noted as a result of the postshot survey.

Serial No. 12 - Northern Dipper Mine

The owner is R. J. Kemp, 466 Cedar Street, Reno, Nevada. This is an active gold mine located five miles north of GZ, at coordinates N 1,647,000/E 567,000. Visited September 30 and October 29, 1963.

12-1 Cabin (See photo 12-1) This is a 24 x 24-foot wood frame and wood siding occupied cabin. AZ 170° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

12-2 Headframe (See photo 12-2) Headframe structure of wood in good usable condition. No damage was noted as a result of the postshot survey.

12-3 Hoist house (See photo 12-3) This hoist house is 15 x 20-foot wood frame and partly wood and partly corrugated metal covered. No windows exist, and structure is unpainted. No damage was noted as a result of the postshot survey.

12-4 Shed (See photo 12-4) This is a 8 x 8-foot shed of wood frame and corrugated metal covering. Has no windows and is in a battered but usable condition. No damage was noted as a result of the postshot survey.

Serial No. 13 - Dromedary Hump Mine

The owner is Dromedary Hump Consolidated Mines, Inc., E. W. Stratton, 287 South Broadway, Fallon, Nevada. This is an inactive gold mine 12 miles north northeast of GZ, at coordinates N 1,636,000/E 618,000. Visited September 30 and October 29, 1963.

13-1 Shed (See photo 13-1) Corrugated metal-covered wood frame. All doors and windows are missing. Corrugated metal roof is ripped and punctured. Hoist house is a wood structure. Roof covering is missing. Roof structure is partly caved and side walls are leaning and broken. No damage was noted as a result of the postshot survey.

13-2 Headframe (See photo 13-2) This is a wood structure with some members broken. No damage was noted as a result of the postshot survey.

13-3 Mill Building (See photo 13-3) This is a 50 x 200-foot mill building of wood. Corrugated metal roof is almost entirely missing. Doors and windows are missing. Generally dilapidated structure. No damage was noted as a result of the postshot survey.

13-4 Shed (See photo 13-4) This is a 20 x 30-foot building of wood frame and corrugated metal siding. Windows are boarded over but glass is generally broken. No damage was noted as a result of the postshot survey.

13-5 Shed (See photo 13-4) This is a 10 x 20-foot wood dilapidated shed. Siding is unpainted, weather beaten and warped. Windows and doors are missing. No damage was noted as a result of the postshot survey.

13-6 Shack (See photo 13-6) This is a 10 x 25-foot shack of wood frame and siding. Generally in dilapidated condition. Doors, windows are missing. Shack is unpainted weather-beaten and boards are warped. Corrugated roof is partly missing. No damage was noted as a result of the postshot survey.

13-7 Store Building (See photo 13-7) This 12 x 24-foot store building is wood frame and siding with wood shingle roof. Doors and windows are missing. Several holes exist in the roof. Siding is weather-beaten and curled. No damage was noted as a result of the postshot survey.

13-8 House (See photo 13-8) This 20 x 30-foot house is wood frame and siding. Doors and windows are missing. Generally dilapidated. No damage was noted as a result of the postshot survey.

Serial No. 14 - Aldona Mine

The owner is Dr. C. P. McCuskey, 395 Williams Street, Fallon, Nevada. This is an inactive lead and silver mine 17 miles northeast of GZ, at coordinates N 1,666,000/E 632,000. Visited September 30 and October 29, 1963.

14-1 Headframe (See photo 14-1) Wooden headframe structure of round wood poles weathered. No damage was noted as a result of the postshot survey.

14-2 Cabin (See photo 14-2) This is a 16 x 16-foot abandoned cabin. Wood frame and siding, wood shingle roof partly missing. No damage was noted as a result of the postshot survey.

14-3 Cabin (See photo 14-2) This is a 16 x 16-foot abandoned cabin. Wood frame and siding, wood shingle roof partly missing. No damage was noted as a result of the postshot survey.

Serial No. 15 - Ben Mathews Shaft

Located 17 miles northeast of GZ, at coordinates N 1,666,000/E 632,000. Visited September 30 and October 29, 1963.

15-1 Shack (See photo 15-1) This shack of wood frame and board siding with corrugated-metal roof is 12 x 12 feet. Siding is weather-beaten and warped. Some of the boards are missing. No damage was noted as a result of the postshot survey.

15-2 Shack (See photo 15-2) This is an 8 x 15-foot wood frame shack covered with roll roofing on roof and sides. Door and window missing. No damage was noted as a result of the post-shot survey.

15-3 Headframe (See photo 15-3) Headframe structure of wood somewhat weathered. No damage was noted as a result of the postshot survey.

Serial No. 16 - Red Top Mine

The owner is Cye Cox, 269 W. Center St., Fallon, Nevada. This is an inactive tungsten mine five miles north of GZ, at coordinates N 1,643,000/E 567,000. Visited October 1 and October 30, 1963.

16-1 East Shaft (See photo 16-1) This weather-beaten wooden headframe is the only standing structure at this site. No damage was noted as a result of the postshot survey.

16-2 West Shaft (See photo 16-2) Wooden headframe structure is the only structure on this site. No damage was noted as a result of the postshot survey.

Serial No. 17 - Red Ant West Mine

The owner is Cye Cox, 269 W. Center St., Fallon, Nevada. This is an inactive tungsten mine four miles south of GZ, at coordinates N 1,600,000/E 555,000. Visited October 1 and October 30, 1963.

17-1 Trailer (See photo 17-1) Abandoned 16-foot trailer, dilapidated and unoccupied. No damage was noted as a result of the postshot survey.

17-2 Headframe (See photo 17-2) Wooden headframe structure, weather-beaten. No damage was noted as a result of the post-shot survey.

Serial No. 18 - East End Mine

The owner is Cye Cox, 269 W. Center St., Fallon, Nevada. This is an inactive tungsten mine four miles south of GZ, at coordinates N 1, 599, 000/E 556, 000. Visited October 1 and October 30, 1963.

18-1 Headframe (See photo 18-1) This wood headframe structure is the only structure at this site. Structure is weathered. No damage was noted as a result of the postshot survey.

Serial No. 19 - Mint Mine

The owner is Scheeline Estate, George Lohse, Atty., 120 Pickard Place, Reno, Nevada. This is an inactive gold mine 12 1/2 miles south of GZ, at coordinates N 1, 557, 000/E 556, 000. Visited October 1 and October 30, 1963.

19-1 Headframe (See photo 19-1) Wooden headframe weather-beaten. 20 x 20-foot hoist house of wood frame and siding in dilapidated condition. Doors and windows missing. Shed also 20 x 20 feet, in dilapidated condition. Metal-covered wood frame with doors and windows missing. No damage was noted as a result of the postshot survey.

Serial No. 20 - Grutt Hill Mine

The owner is Eugene W. Grutt, c/o H. E. Dunning, Atty., 6420 Fair Oaks Blvd., Carmichael, California. This is an inactive gold mine 13 miles south of GZ, at coordinates N 1, 551, 000/E 552, 000. Visited October 1 and October 30, 1963.

20-1 Headframe (See photo 20-1) This lower level wood headframe is weathered but otherwise in fair condition. No damage was noted as a result of the postshot survey.

20-2 Hoist House (See photo 20-2) Lower level hoist house. Wood frame and siding, and corrugated metal roof. Siding weather-beaten, and doors and windows missing. No damage was noted as a result of the postshot survey.

20-3 Shack (See photo 20-3) Lower level 16 x 16-foot shack of wood frame and siding and corrugated metal roof. Siding weather-beaten and warped. Door panels broken and windows missing. No damage was noted as a result of the postshot survey.

20-4 Shed (See photo 20-4) Upper level 15 x 30-foot shed of wood frame and siding and corrugated metal roof. Roof beaten and partly missing. Siding weathered, warped, and partly missing. All doors and windows missing. No damage was noted as a result of the postshot survey.

20-5 Hoist House (See photo 20-5) Upper level hoist house. 15 x 30-foot wood structure with corrugated metal roof partly missing. Doors and windows missing. No damage was noted as a result of the postshot survey.

Serial No. 21 - Nevada Sheelite Mine

The owner is Kennametal, Inc., E. H. Colwell, Manager, 347 Taylor Street, Fallon, Nevada. This is an inactive tungsten mine 13 miles south of GZ, at coordinates N 1,554,000/E 572,000. The structures are now used to produce tungsten carbide. Visited October 2, October 8, October 28, and November 4, 1963. A total of 4 structures were photographed, both preshot and postshot, and 136 photographs of this property are included in this report.

21-1 Residence (See photo 21-1) This structure is wood frame, asbestos shingle covered. Size is about 27 x 55 feet. AZ 295° clockwise from magnetic north. This has been recently moved to this site and is now in the process of being renewed inside and out. No damage was noted as a result of the postshot survey.

21-2 Residence (See photo 21-2) This is a wood frame, aluminum siding covered structure. Size is 27 x 55 feet. AZ 295° clockwise from magnetic north. This structure has been recently

moved to this site, and is in the process of being renewed inside and out. The aluminum siding is new. No damage was noted as a result of the postshot survey.

21-3 Residence (See photo 21-3) This structure is wood frame, asbestos shingle covered. Size is 27 x 55 feet. AZ 295° clockwise from magnetic north. This structure has been recently moved to this site, and is in the process of being renewed inside and out. No damage was noted as a result of the postshot survey.

21-4 Swimming Pool (See photo 21-4) This structure is a concrete swimming pool with a chain link fence around it AZ 130° clockwise from magnetic north. Size 20 x 50 feet. No damage was noted as a result of the postshot survey.

21-5 Bath House (See photo 21-5) This structure is a wood frame and corrugated-metal-covered bath house. Size about 12 x 22 feet. AZ 40° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-6 Shack (See photo 21-6) This is a wood frame, wood-covered shack, about 10 x 12 feet. AZ 225° clockwise from magnetic north. The structure is unpainted and weathered and the glass in the door is broken. No damage was noted as a result of the postshot survey.

21-7 Bath House (See photo 21-7) This structure is a 9 x 15-foot wood frame and corrugated-metal-covered bath house for women. AZ 225° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-8 Shack (See photo 21-8) This is an 8 x 15-foot wood shack. AZ 250° clockwise from magnetic north. Flywood siding is weathered and checked. No damage was noted as a result of the postshot survey.

21-9 Trailer (See photo 21-9) This is a 36-foot long by 8-foot wide metal covered trailer. AZ 227° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-10 Trailer (See photo 21-10) This is a 24-foot long by 8-foot wide metal-covered trailer. AZ 227° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-11 Residence (See photo 21-11) This structure is a residence of wood frame with partly wood siding and partly corrugated metal covering. The size of the structure is 27 x 42 feet. AZ 35° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-12 Residence (See photo 21-12) This structure is a 27 x 42-foot residence of wood frame with part wood siding and the rest covered with corrugated metal. AZ 80° clockwise from magnetic north. No damage was noted as a result of the post-shot survey.

21-13 School House and Residence (See photo 21-13) This structure is a combined school house and residence of wood frame with part wood siding and the rest covered with corrugated metal. Roof is corrugated metal. It is 27 x 36 feet. AZ is 0° from magnetic north. No damage was noted as a result of the post-shot survey.

21-14 Residence (See photo 21-14) A residential wood frame structure covered partly with wood siding and partly with corrugated metal. Dimensions are 36 x 42 feet. Roof is corrugated metal. AZ is 70° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-15 Bath House (See photo 21-15) Bath house structure, 9 x 24 feet, of wood frame and wood siding with some corrugated metal covering. AZ 330° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-16 Residence (See photo 21-16) This is a residential structure approximately 27 feet square, of wood frame and corrugated metal siding. AZ 330° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-17 Trailer (See photo 21-17) This is an 18-foot long by 8-foot wide metal-covered trailer. AZ 115° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-18 Residence (See photo 21-18) This is a 15 x 18-foot wood frame residential structure with wood and corrugated metal siding. AZ 115° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-19 Residence (See photo 21-19) This is a 12 x 24-foot residence of wood frame and wood siding. AZ 220° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-20 Residence (See photo 21-20) This is an 18 x 36-foot residential structure of wood frame and corrugated metal siding. AZ 140° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-21 Residence (See photo 21-21) This is a 12 x 12-foot residence of wood frame and siding. AZ 135° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-22 Residence (See photo 21-22) This is an 18 x 27-foot residential structure of wood frame and corrugated metal siding. AZ 220° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-23 Residence (See photo 21-23) This is a 24 x 24-foot residential structure of wood frame and corrugated metal siding. AZ 220° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-24 Residence (See photo 21-24) This is a 27 x 30-foot residential structure of wood frame and corrugated metal siding. AZ 70° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-25 Bunkhouse (See photo 21-25) This is a 24 x 45-foot bunkhouse of wood frame and wood siding. AZ 250° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-26 Tanks (See photo 21-26) Two steel stove oil tanks 4 feet in diameter by 12 feet long. AZ 250° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-27 Tank (See photo 21-27) Steel propane tank, 4 feet in diameter by 45 feet long. AZ 250° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-28 Pump (See photo 21-28) Manual type gasoline pump. AZ 90° from magnetic north. No damage was noted as a result of the postshot survey.

21-29 Shed (See photo 21-29) Photo shows a 12 x 12-foot burned-out shed. AZ 345° clockwise from magnetic north. It was assumed that this structure would be removed before the shot date; however, it was still in place after the shot. No damage was noted as a result of the postshot survey.

21-30 Office (See photo 21-30) This is a 20 x 40-foot office building of wood frame and wood siding. AZ 80° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-31 Office (See photo 21-31) This structure is a 15 x 20-foot wood frame and corrugated metal-covered office building. AZ 275° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-32 Residence (See photo 21-32) This structure is a residence of wood frame and corrugated metal siding. Size is 18 x 27 feet. AZ 225° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-33 Store Room (See photo 21-33) This is a 12 x 15-foot wood frame with corrugated metal siding store room structure. AZ 150° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-34 Change Room (See photo 21-34) Change room structure, 30 x 30 feet, of wood frame and corrugated metal siding. AZ 130° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-35 Bunkhouse (See photo 21-35) This is a wood frame and siding 6 x 15-foot bunkhouse. AZ 145° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-36 Bunkhouse (See photo 21-36) This is a wood frame and corrugated metal siding 12 x 14-foot burkhous. AZ 145° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-37 Club House (See photo 21-37) This is a 12 x 42-foot wood frame and wood siding club house building. AZ 245° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-38 Residence (See photo 21-38) This is a 21 x 30-foot residence of wood frame with corrugated metal siding. AZ 330° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-39 Storehouse (See photo 21-39) This is a 21 x 42-foot wood frame and wood siding storehouse. AZ 230° clockwise from magnetic north. No damage was noted as a result of the post-shot survey.

21-40 Bunkhouse (See photo 21-40) This is a 27 x 30-foot bunkhouse of wood frame with corrugated metal siding. This is a two story structure. AZ 230° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-41 Residence (See photo 21-41) This is a 15 x 18-fcot wood frame and corrugated metal siding residential structure. AZ 355° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-42 Residence (See photo 21-42) This is a 15 x 15-foot residence of wood frame and corrugated metal siding. AZ 175° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-43 Residence (See photo 21-43) This is an 18 x 45-foot residence of wood frame and corrugated metal siding. AZ 175° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-44 Storehouse (See photo 21-44) This is a 14 x 27-foot wood frame and corrugated metal storehouse. AZ 345° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-45 Residence (See photo 21-45) This is a 12 x 15-foot residence of wood frame and corrugated metal siding. AZ 250° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-46 Residence (See photo 21-46) This is a 12 x 15-foot residence of wood frame and metal siding. AZ 250° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-47 Residence, Cook House and Commissary (See photo 21-47) This is a 39 x 48-foot residence, cook shack, and commissary structure of wood frame and metal siding. AZ 340° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-48 Trailer (See photo 21-48) This is a 25 x 8-foot metal covered trailer. AZ 85° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-49 Acid Plant (See photo 21-49) Acid plant, vats, and tanks. The plant is an old 42 x 60-foot wood structure. A horizontal 5 x 35-foot liquid chlorine steel tank and a 14-inch diameter by 18-foot high porcelain regenerating tower are adjacent to the building. Of the 18 wood stave vats around the structure,

two are 8 x 16 feet, two are 4 x 12 feet, two are 6 x 12 feet, two are 12 x 14 feet, two are 8 x 12 feet, one is 4 x 20 feet, three are 3 x 12 feet, and four are 4 x 4 feet. A steel tower holds an 8 x 10-foot and three 5 x 7-foot steel tanks. AZ 65° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-50 Tank (See photo 21-50) The 5 x 22-foot hydrochloric acid tank of steel on 8-foot wood cribbing was built during 1963. AZ 250° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-51 New Acid Plant (See photo 21-51) The main building is a 36 x 72-foot steel rigid frame with metal siding. (Butler type building). The 10 x 10-foot electrical building is wood frame with metal siding. New acid plant now under construction. AZ 70° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-52 Assay, Testing and Storage (See photo 21-52) The building is a 36 x 44-foot steel rigid frame with metal siding, used as an assay lab and physical testing and storage building. AZ 290° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-53 Mixing, Cleaning and Storage (See photo 21-53) The building is a 42 x 126-foot wood frame structure with metal siding. Used as a mixing shed, cleaning room and for storage. AZ 290° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-54 Crushing Plant (See photo 21-54) Crushing plant structure of steel, consisting of crusher, bins, conveyors and platforms. AZ 25° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-55 Roaster Building (See photo 21-55) This roaster building is a 42 x 48-foot steel rigid frame, with metal siding. AZ 10° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-56 Warehouse (See photo 21-56) This 20 x 34-foot warehouse is all metal with glass front. AZ 80° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-57 Power House (See photo 21-57) This standby power house is 45 x 60 feet, steel and wood frame with metal siding. AZ 350° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-58 Carpentry Shop (See photo 21-58) Building is a 14 x 36-foot wood frame and metal-siding structure used as carpentry shed. AZ 30° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-59 Hoist House (See photo 21-59) This hoist house is a 20 x 36-foot wood frame and corrugated metal-siding structure. AZ 210° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-60 Blacksmith Shop (See photo 21-60) Building is a 14 x 48-foot blacksmith shop of wood frame and corrugated metal siding. AZ 195° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-61 Timber Shed (See photo 21-61) This timber shed is a 22 x 48-foot wood frame and metal siding structure. AZ 350° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-62 Headframe (See photo 21-62) Steel headframe structure with an approximately 30 x 30-foot base. AZ 195° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-63 Water Tank (See photo 21-63) Wood stave water tank, 22 feet in diameter and 12 feet high. Built June 1963. AZ 280° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-64 Mill (See photo 21-64) Unused mill structure with crushing plant of metal frame and covering. Also covered pipeline in 1 x 2-foot metal and wood box. AZ 115° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-65 Bagging House (See photo 21-65) This structure is a 36 x 42-foot rigid frame, metal-covered bagging house. AZ 75° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-66 Conveyor (See photos 21-66(1) and 21-66(2)) Kiln site area is 26 x 135 feet, with 85-foot long swinging conveyor. Conveyor support is trussed steel structure. Kiln site is reinforced concrete and brick. AZ 85° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

21-67 Work Shed (See photo 21-67) This is a 15 x 15-foot work shed of wood frame with metal siding. AZ 70° clockwise from magnetic north. No damage was noted as a result of the postshot survey.

Serial No. 22 - Broken Hills Mine

The owner is Henry A. Peterson, P.O. Box 350, Fallon, Nevada. This is an active lead-silver mine located 22 miles southeast of GZ, at coordinates N 1,567,000/E 663,000. Visited October 3 and October 31, 1963.

22-1 Headframe (See photo 22-1) Wooden headframe structure. Platform is warped and split. No damage was noted as a result of the postshot survey.

22-2 Shed (See photo 22-2) This wooden shed is 12 x 12 feet. Roof is caved in. Outer boards are weathered and warped and some missing. Doors and windows are missing. No damage was noted as a result of the postshot survey.

22-3 Shed (See photo 22-3) This shed is a 10 x 50-foot dilapidated wood structure. Walls are leaning and roof has sagged. Roofing, doors, windows and siding, in part, are missing. No damage was noted as a result of the postshot survey.

22-4 Trailer (See photo 22-4) This is a 20-foot metal covered trailer. No damage was noted as a result of the postshot survey.

22-5 Trailer (See photo 22-5) This 8 x 22-foot metal covered trailer was in good condition at the time of the preshot visit, October 3, 1963, but was entirely destroyed by fire prior to the postshot visit on October 31, 1963. According to the lessees, Jim and Tony Trease, destruction of the trailer occurred during the weekend of October 19, and was not in any way associated with the Shoal Event.

22-6 Bin (See photo 22-6) Wood, loading structure. No damage was noted as a result of the postshot survey.

22-7 Outhouse (See photo 22-7) This 4 x 4-foot wooden outhouse is weathered but intact. No damage was noted as a result of the postshot survey.

22-8 Shed (See photo 22-8) This 6 x 10-foot unoccupied wooden shed is in poor condition. Weathered and warped. Doors and windows missing. No damage was noted as a result of the postshot survey.

22-9 House (See photo 22-8) This 20 x 50-foot wood structure is partly occupied. In poor condition, with some doors and windows missing. No damage was noted as a result of the postshot survey.

22-10 Outhouse (See photo 22-8) This 3 x 5-foot outhouse is usable but weathered and warped. No damage was noted as a result of the postshot survey.

22-11 Outhouse (See photo 22-8) This 3 x 5-foot outhouse is leaning, weathered, and warped. Door missing. No damage was noted as a result of the postshot survey.

Serial No. 23 - Eagleville Mine

Located 14 miles south southeast of GZ, at coordinates N 1,558,000/E 595,000. Visited October 2 and October 28, 1963.

23-1 Headframe (See photo 23-1) Wood headframe, tramway, and ore bin. Weather-beaten and abandoned. Hoist house structure with roof missing. Siding warped and missing, and doors and windows missing. No damage was noted as a result of the postshot survey.

23-2 Shack (See photo 23-2) This 20 x 20-foot shack is wood frame and siding with corrugated metal roof. Siding weathered and warped. Doors and windows missing. No damage was noted as a result of the postshot survey.

23-3 House (See photo 23-3) This 20 x 36-foot house is wood frame and siding with corrugated metal roof. Siding weathered and warped. Doors and windows missing. No damage was noted as a result of the postshot survey.

23-4 Headframe and Ore Bins (See photo 23-4) Headframe, tramway, and ore bins all of wood construction, all weathered. No damage was noted as a result of the postshot survey.

Serial No. 24 - Robinson-Simkin Ace Claims

Located 15 miles south southeast of GZ, at coordinates N 1, 558, 000/E 595, 000. Visited October 2 and October 28, 1963.

24-1 Headframe (See photo 24-1) Wood prospect headframe is the only structure on this site. No damage was noted as a result of the postshot survey.

Serial No. 25 - Happy Return Mine

The owner is Mrs. A. F. Rachel, Rawhide, Nevada. This is an inactive antimony mine located 11 miles south of GZ, at coordinates N 1, 563, 000/E 562, 000. Visited October 1 and October 30, 1963.

25-1 Ladder (See photo 25-1) No structures except ladder at this location. No damage was noted as a result of the postshot survey.

Serial No. 26 - Simon Mine

The owner is Federal Resources Corp., 1370 South Third West Street, Salt Lake City 15, Utah. This is an active lead-silver mine located 52 miles east of GZ, at coordinates N 1,390,000/E 703,500. Visited October 10 and October 31, 1963.

26-1 Headframe (See photo 26-1) Wood headframe structure. No damage was noted as a result of the postshot survey.

26-2 Shaft Collar (See photo 26-2) Wood shaft collar and base of headframe. No damage was noted as a result of the postshot survey.

26-3 Hoist House and Generator Building (See photo 26-3) Hoist house and generator buildings of wood frame and corrugated metal roofing and siding. Structures have some siding missing. No damage was noted as a result of the postshot survey.

26-4 Camp Buildings (See photo 26-4) Abandoned, dilapidated camp structures of wood construction. Doors and windows generally are missing. No damage was noted as a result of the postshot survey.

Serial No. 27 - Buffalo Hump Mine

The owner is Dr. F. H. Shambaugh, 179 S. Laverne Street, Fallon, Nevada. This is an inactive gold-silver mine located 31 miles east of GZ, at coordinates N 1,607,500/E 721,000. Visited October 22 and November 1, 1963.

27-1 Trestle (See photo 27-1) Lower wooden trestle dilapidated. No damage was noted as a result of the postshot survey.

27-2 Trestle (See photo 27-2) Upper wooden trestle dilapidated. No damage was noted as a result of the postshot survey.

27-3 Blacksmith Shop (See photo 27-3) This is a 12 x 12-foot corrugated metal covered wood frame structure. No damage was noted as a result of the postshot survey.

APPENDIX B



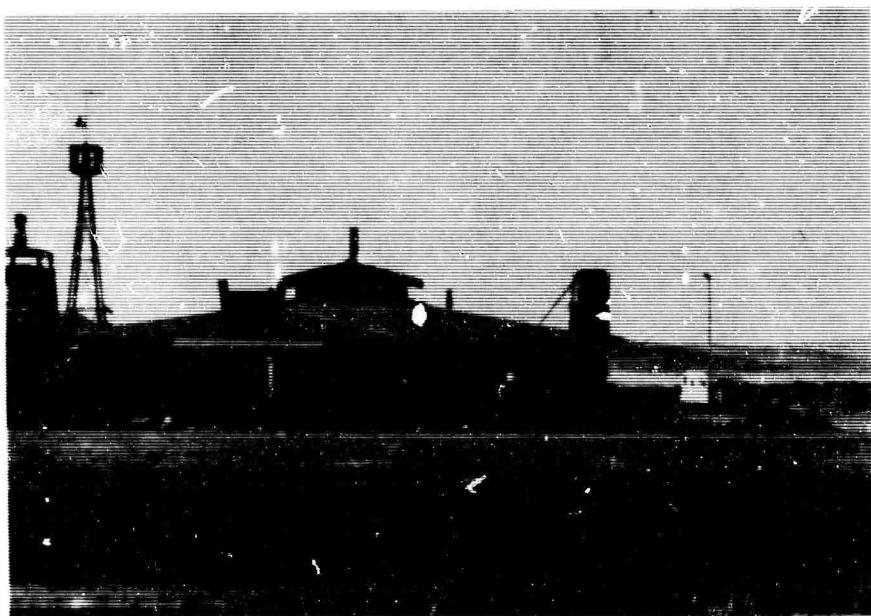


Photo No. 2-1 - Preshot - September 23, 1963

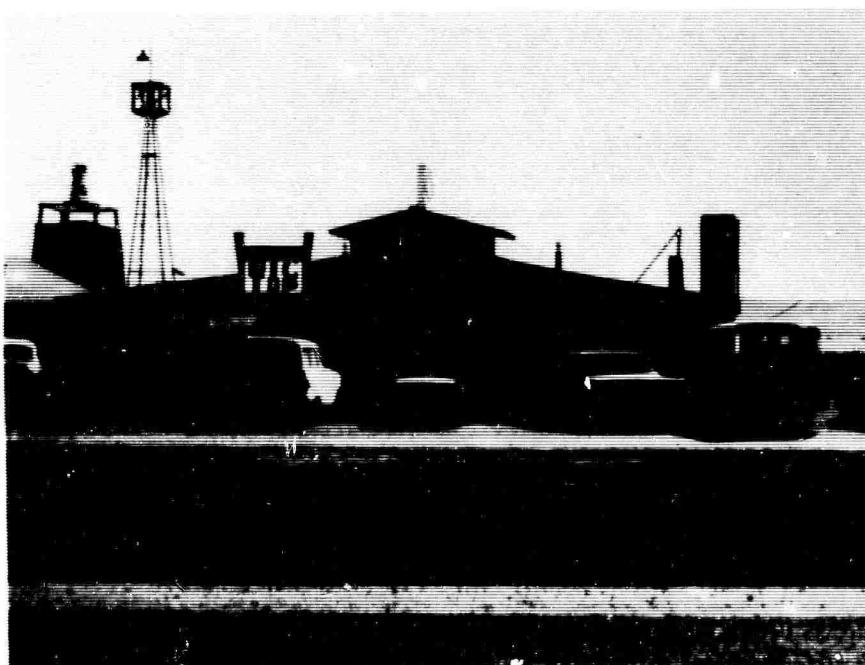


Photo No. 2-1 - Postshot - October 26, 1963

SALT WELLS

B-1

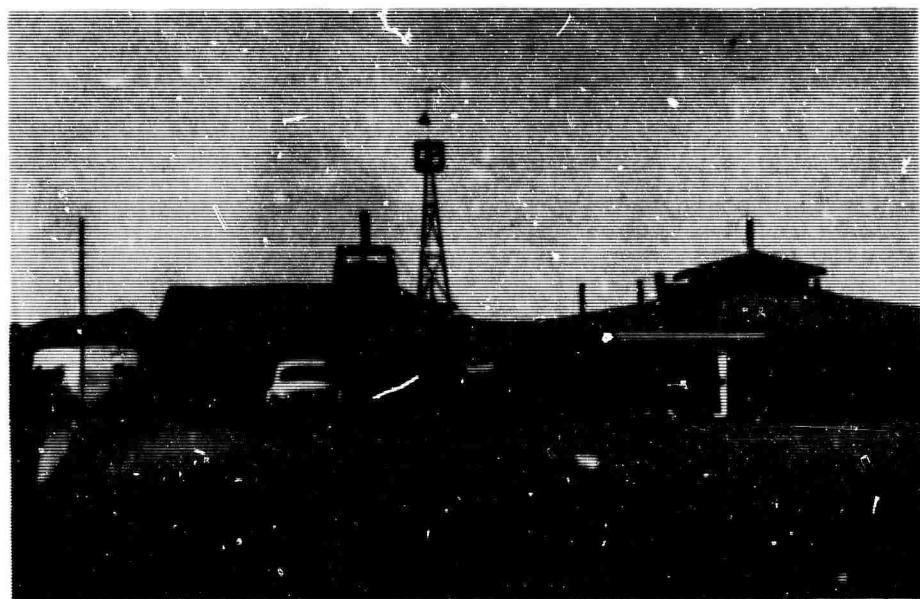


Photo No. 2-2 - Preshot - September 23, 1963



Photo No. 2-2 - Postshot - October 26, 1963

SALT WELLS

B-2

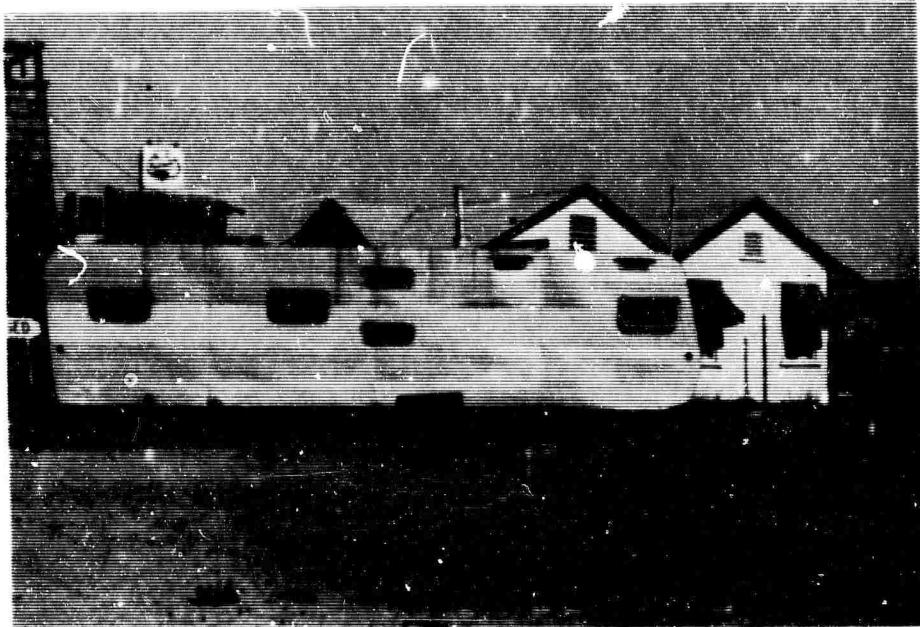


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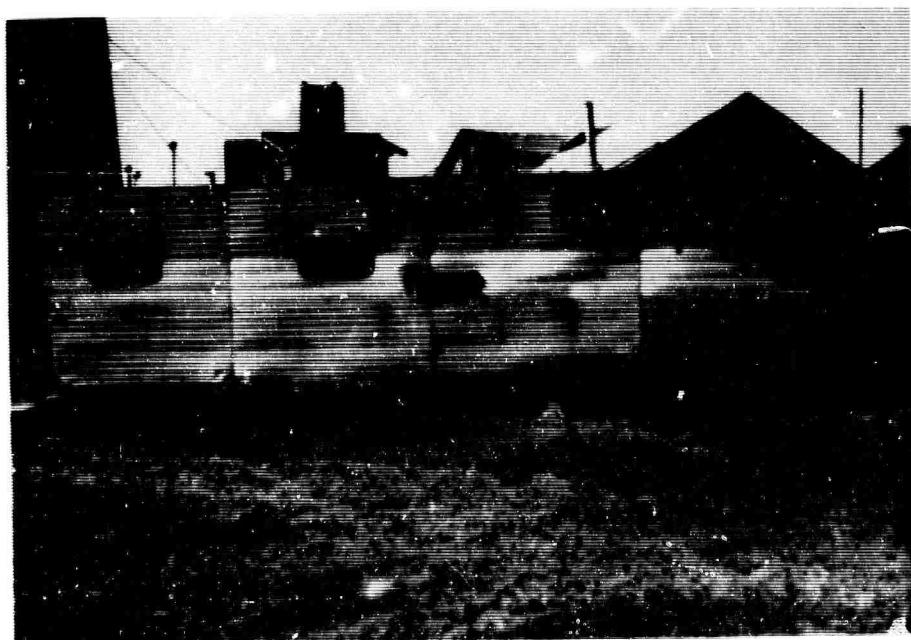


Photo No. 2-3 - Postshot - October 26, 1963

SALT WELLS

B-3



Photo No. 2-4 - Preshot - September 23, 1963

No Photo Taken;

Trailer Moved

Photo No. 2-4 - Postshot - October 26, 1963

SALT WELLS

B-4

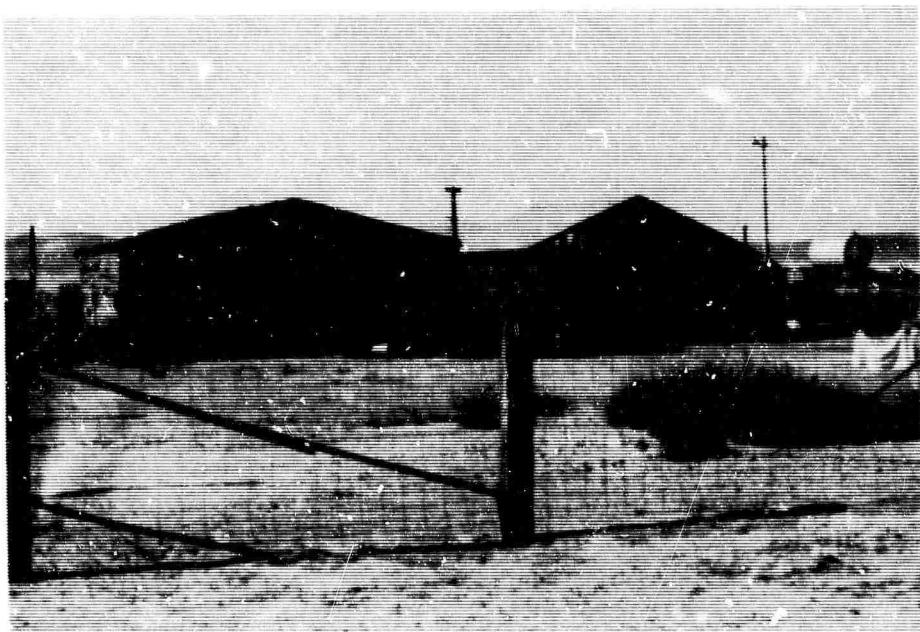


Photo No. 2-5 - Preshot - September 23, 1963



Photo No. 2-5 - Postshot - October 26, 1963

SALT WELLS

B-5



Photo No. 3-1 (1) - Preshot - September 23, 1963

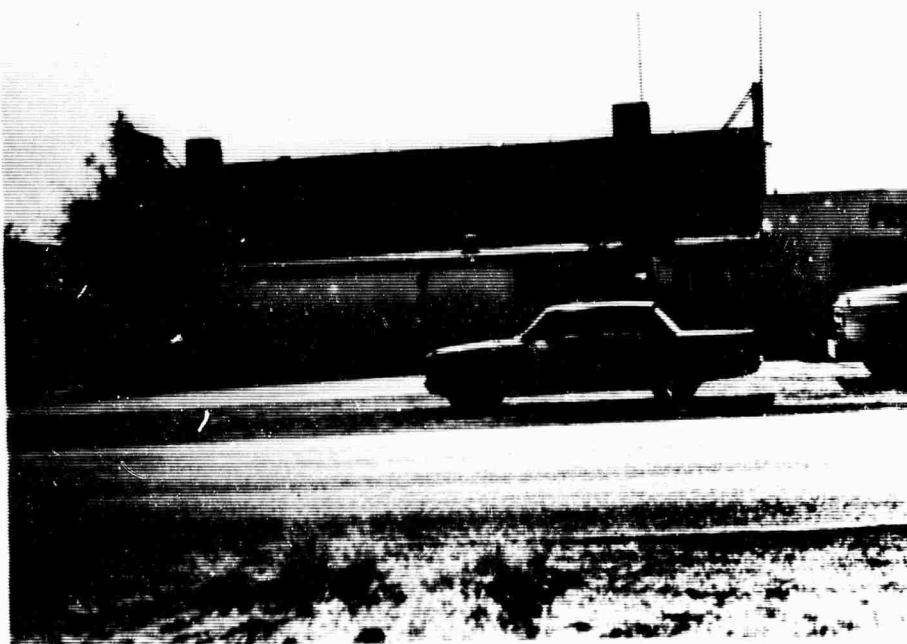


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FRENCHMAN STATION

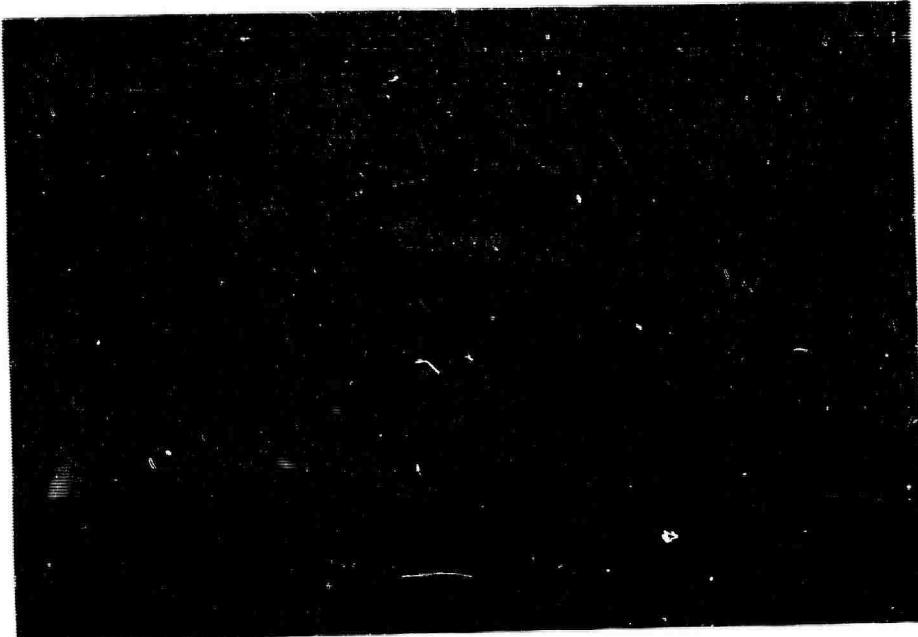


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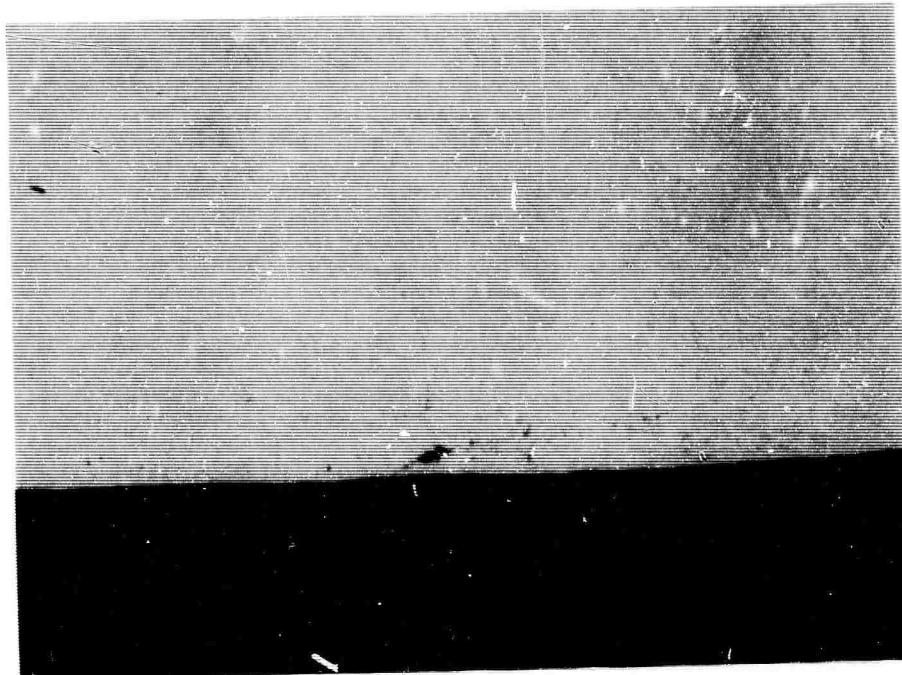


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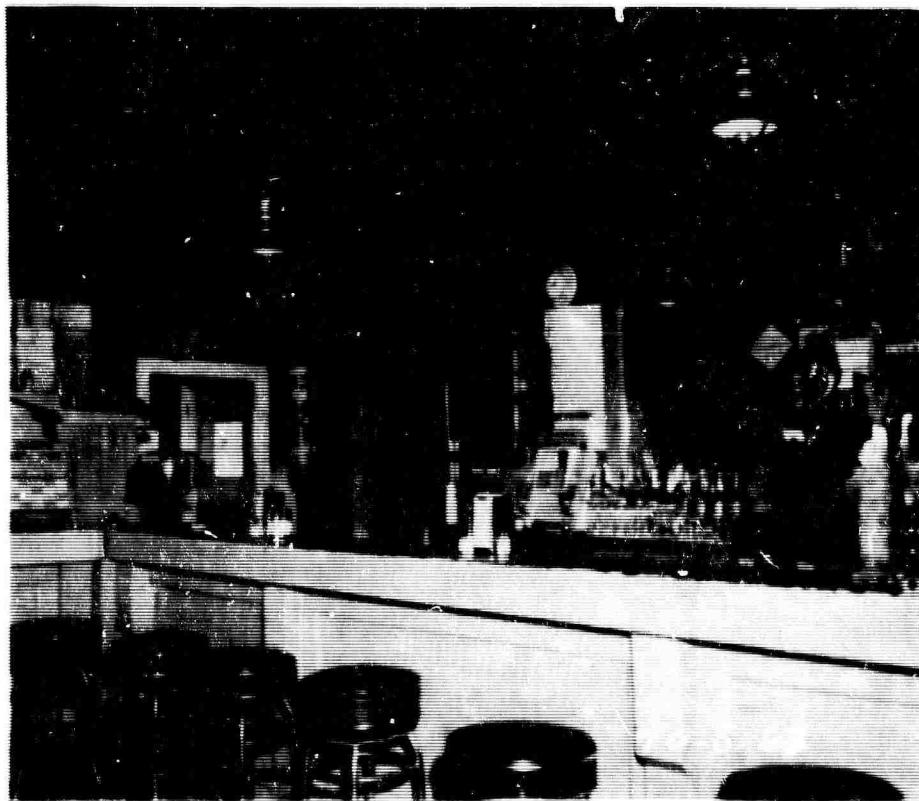


Photo No. 3-1 (3) - Preshot - October 8, 1963



Photo No. 3-1 (3) - Postshot - October 26, 1963

FRENCHMAN STATION

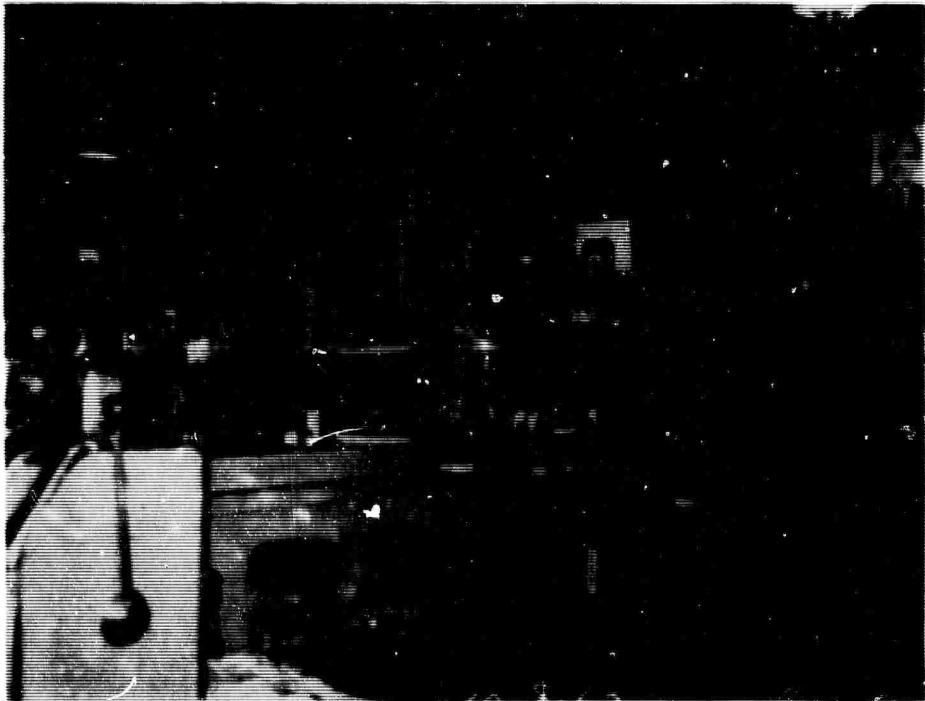


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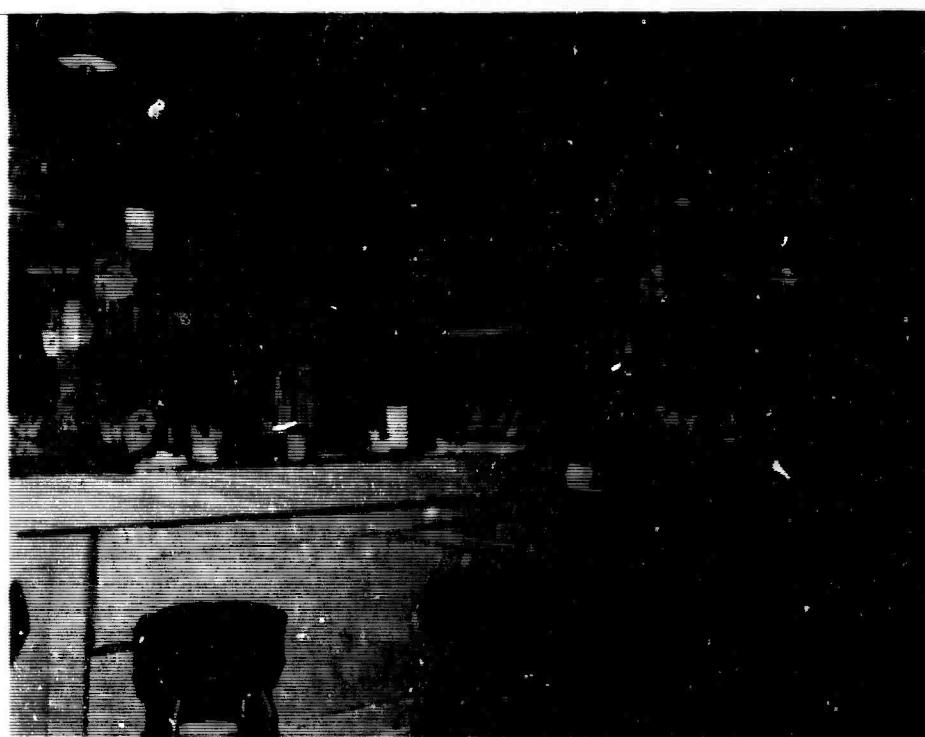


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FRENCHMAN STATION

B-9

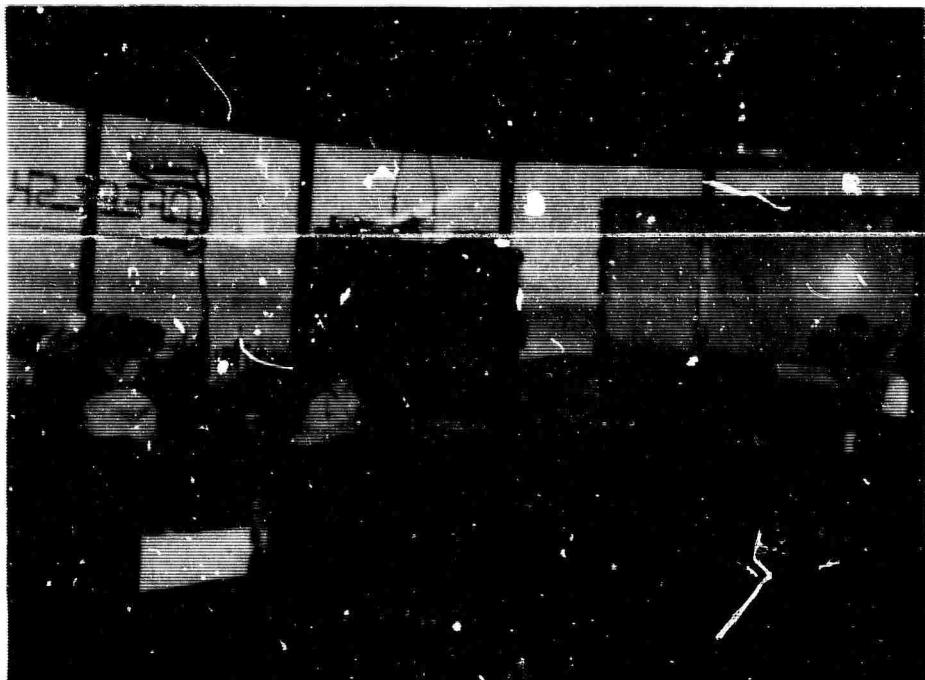


Photo No. 3-1 (5) - Preshot - October 8, 1963



Photo No. 3-1 (5) - Postshot - October 26, 1963

FRENCHMAN STATION

B-10

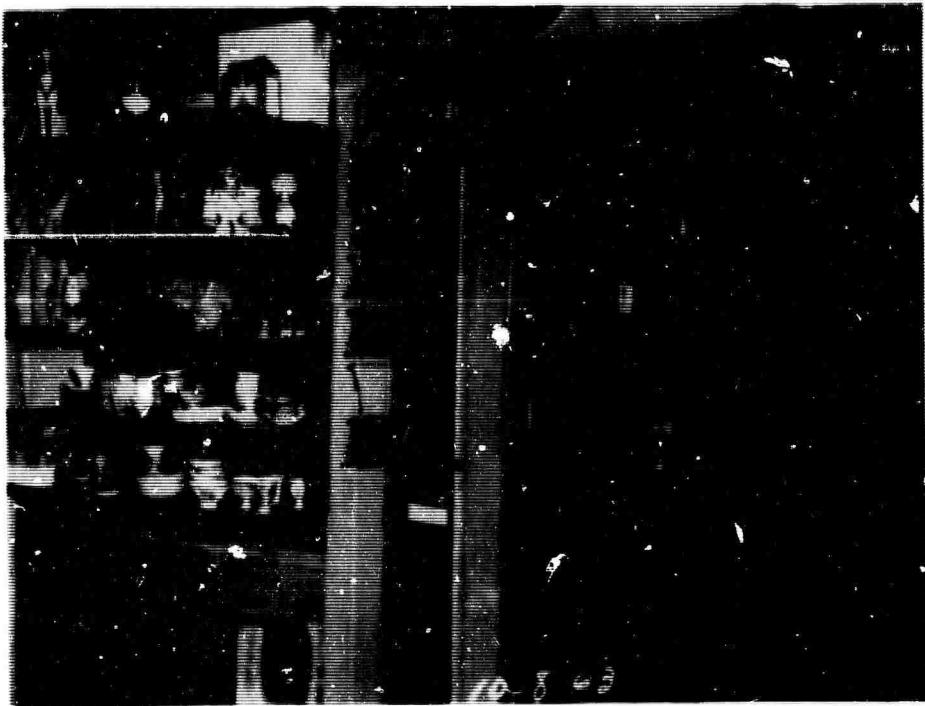


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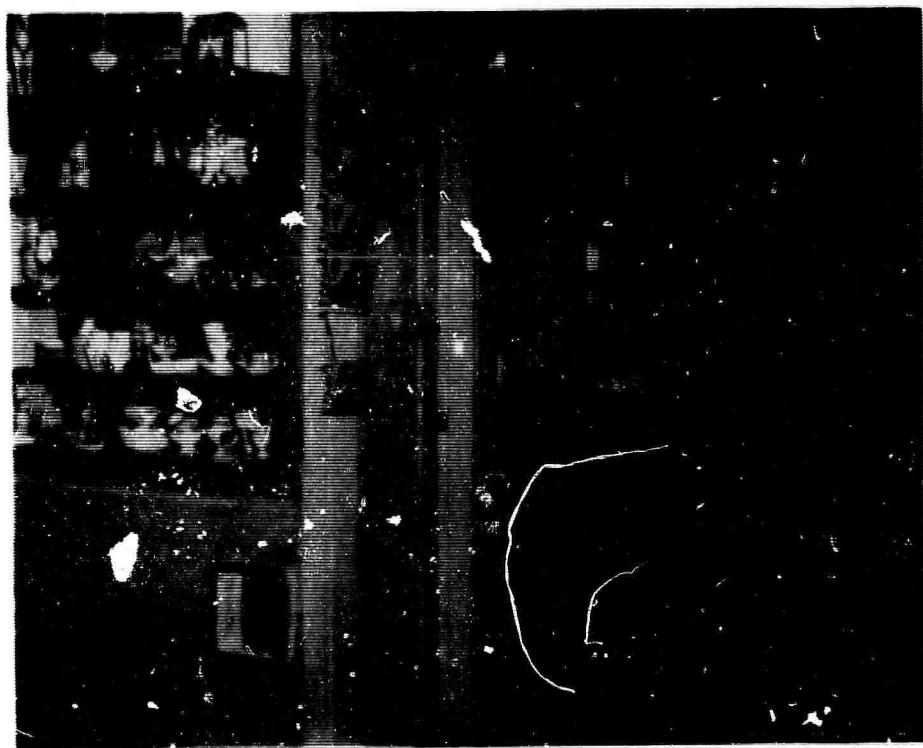


Photo No. 3 (6) - Postshot - October 26, 1963

FRENCHMAN STATION

B-11

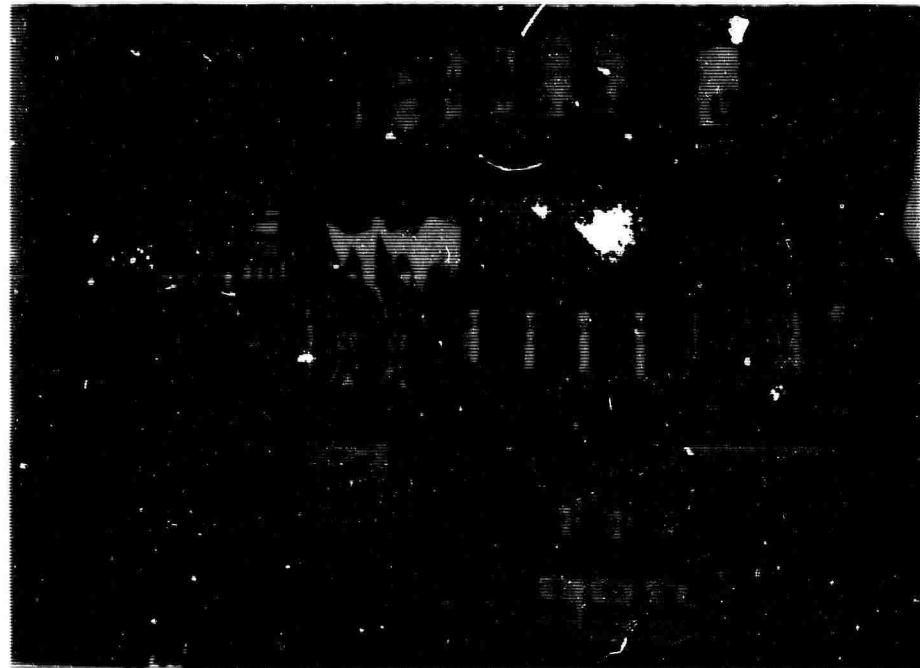


Photo No. 3-1 (7) - Preshot - October 8, 1963



Photo No. 3-1 (7) - Postshot - October 26, 1963

FRENCHMAN STATION

B-12



Photo No. 3-1 (8) - Preshot - October 8, 1963



Photo No. 3-1 (8) - Postshot - October 26, 1963

FRENCHMAN STATION

B-13



Photo No. 3-1 (9) - Preshot - October 8, 1963

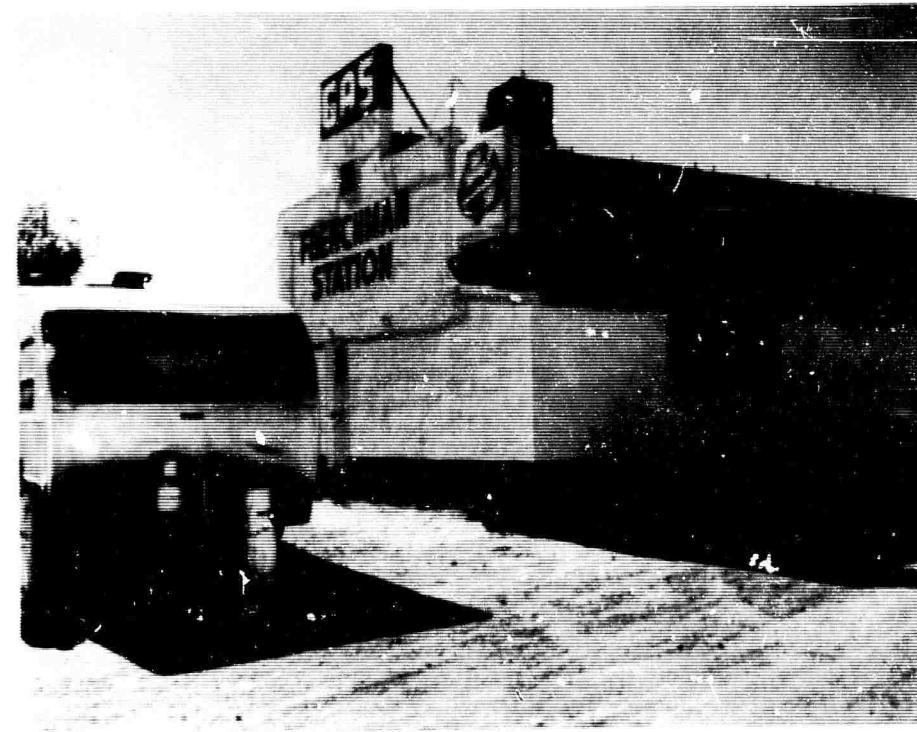


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FRENCHMAN STATION

B-14

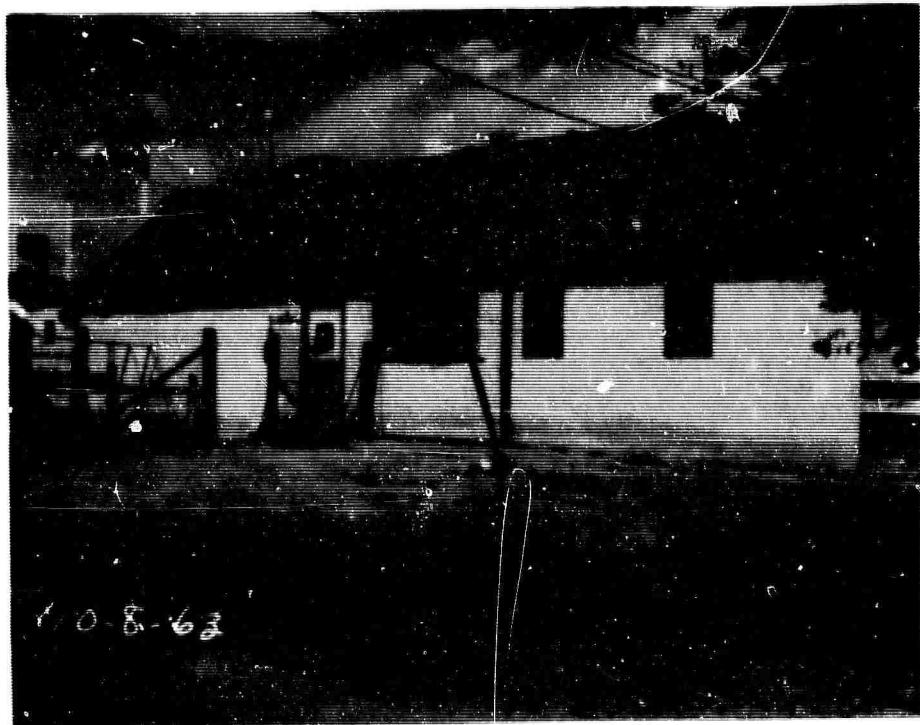


Photo No. 3-1 (10) - Preshot - October 8, 1963



Photo No. 3-1 (10) - Postshot - November 6, 1963

FRENCHMAN STATION

B-15

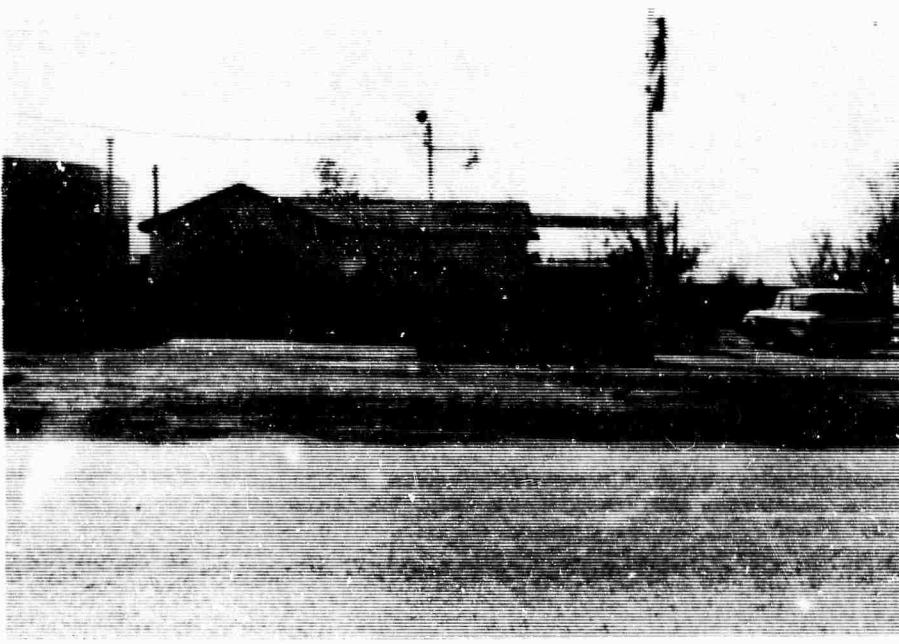


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Photo No. 3-2 (1) - Postshot - October 26, 1963

FRENCHMAN STATION

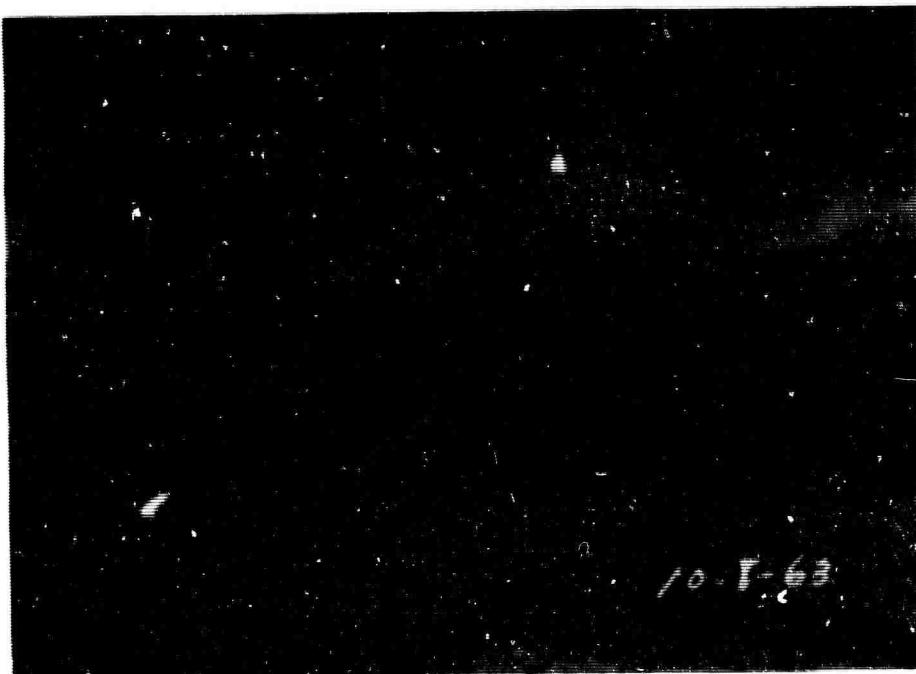


Photo No. 3-2 (2) - Preshot - October 8, 1963



Photo No. 3-2 (2) - Postshot - October 26, 1963

FRENCHMAN STATION

B-17

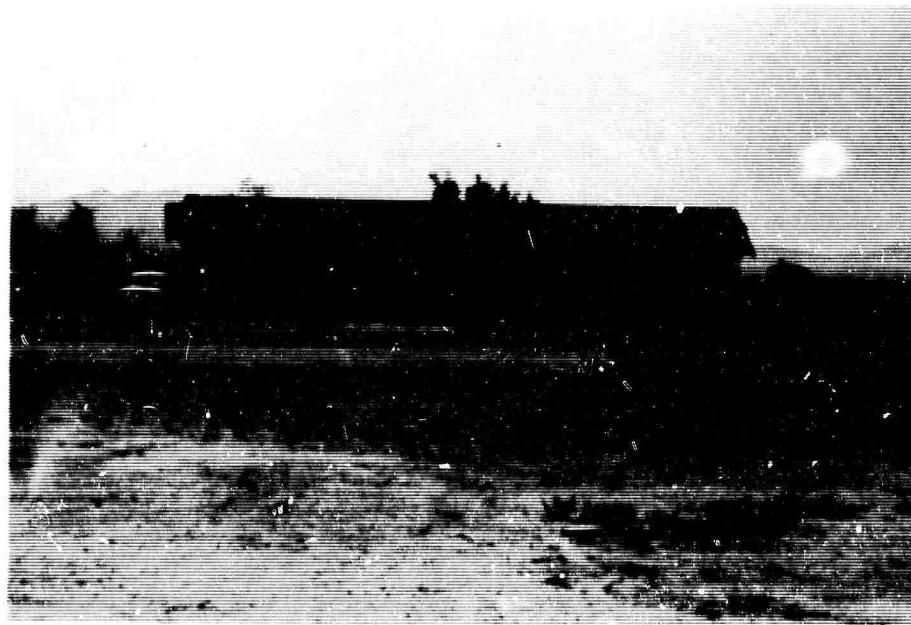


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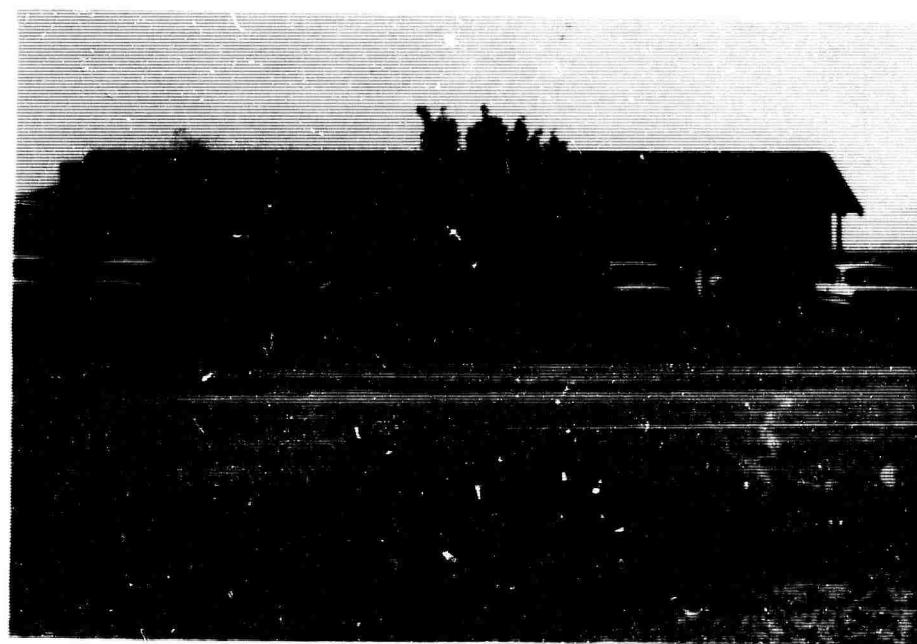


Photo No. 3-3 (1) - Postshot - October 26, 1963

FRENCHMAN STATION



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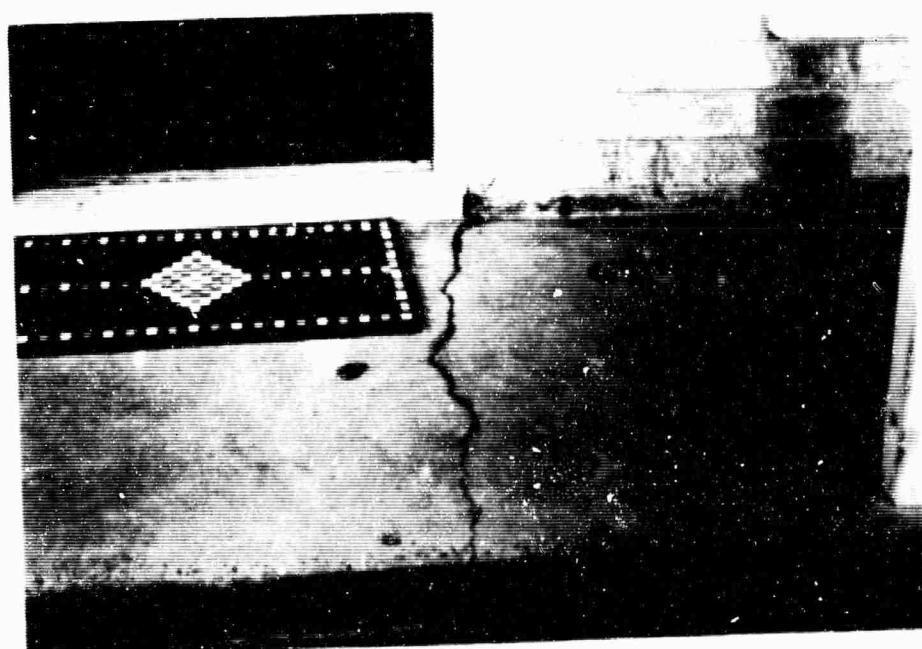


Photo No. 3-3 (2) - Postshot - October 26, 1963

FRENCHMAN STATION

B-19



Photo No. 3-3 (3) - Preshot - October 8, 1963



Photo No. 3-3 (3) - Postshot - October 26, 1963

FRENCHMAN STATION

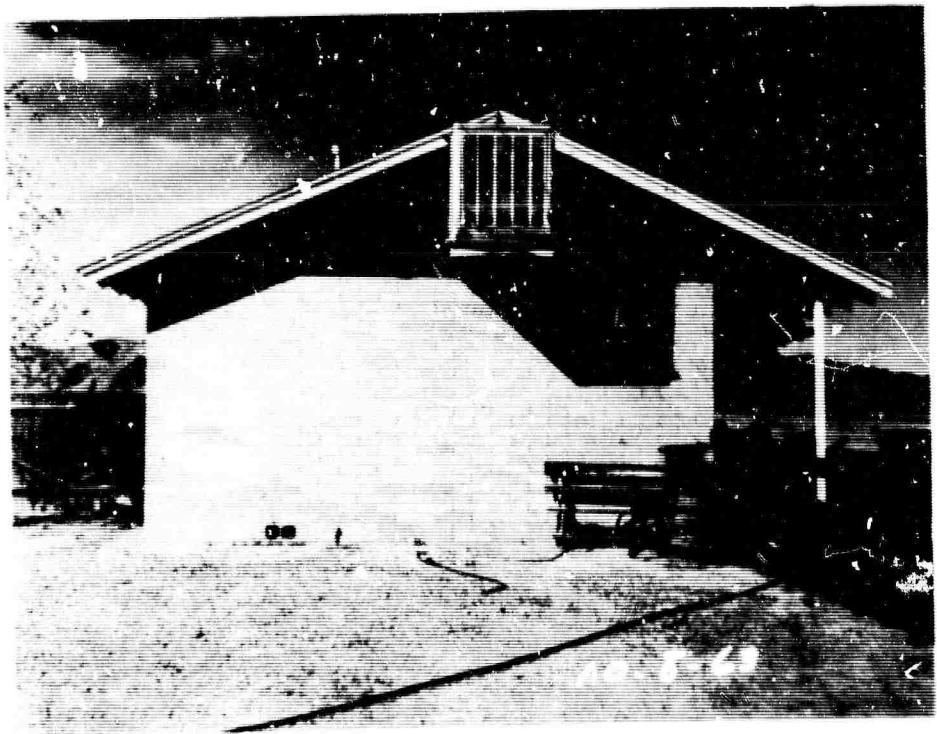


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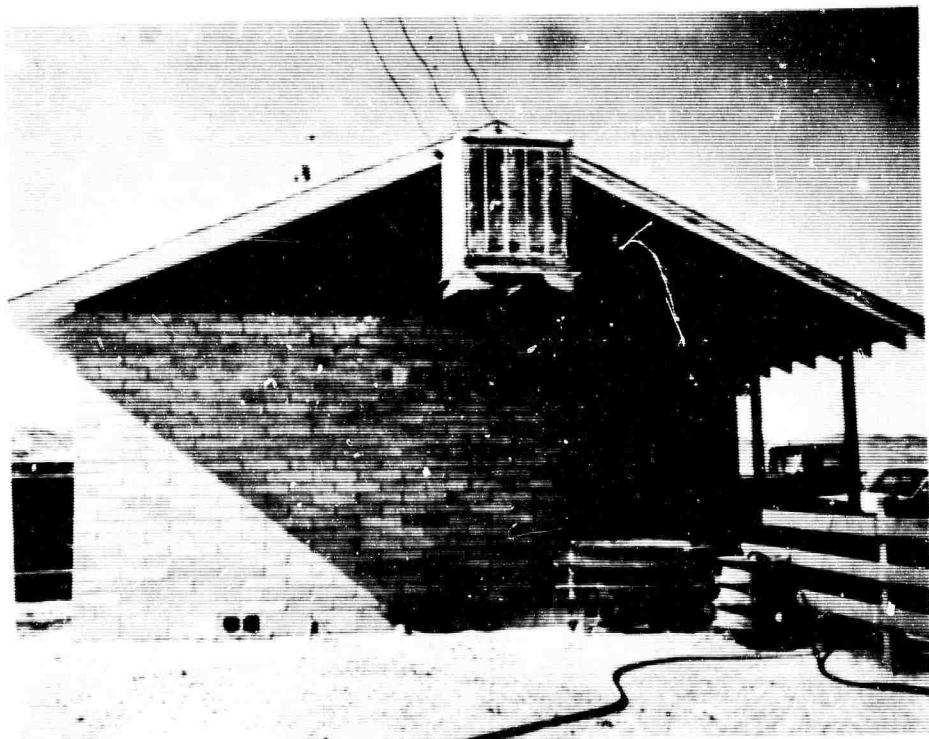


Photo No. 3-3 (4) - Postshot - October 26, 1963

FRENCHMAN STATION

B-21



Photo No. 3-3 (5) - Preshot - October 8, 1963



Photo No. 3-3 (5) - Postshot - October 26, 1963

FRENCHMAN STATION

B-22



Photo No. 3-3 (6) - Preshot - October 8, 1963

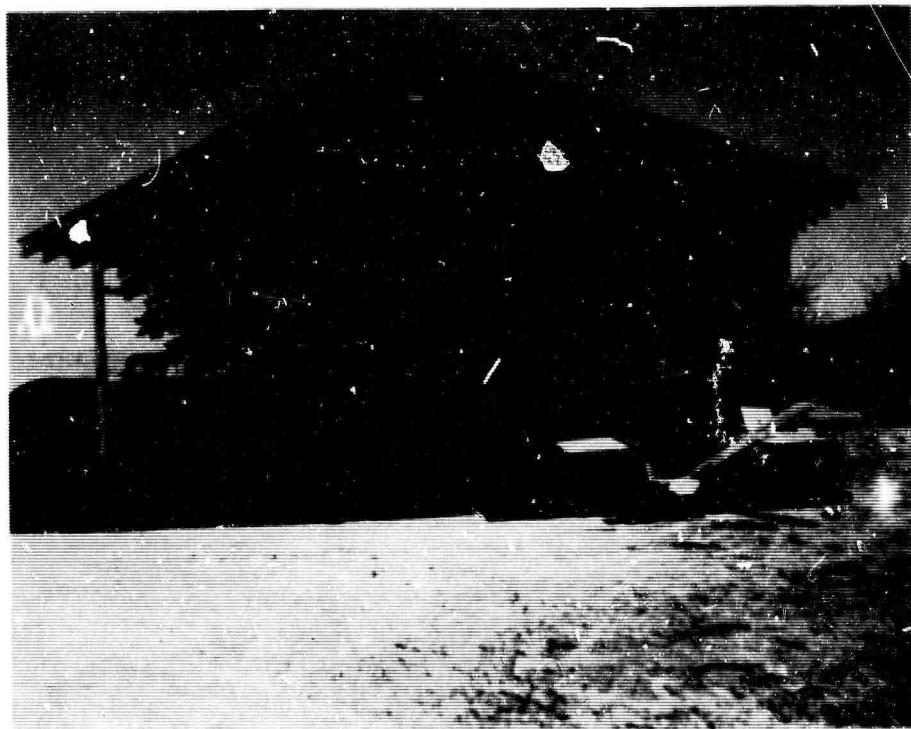


Photo No. 3-3 (6) - Postshot - October 26, 1963

FRENCHMAN STATION

B-23

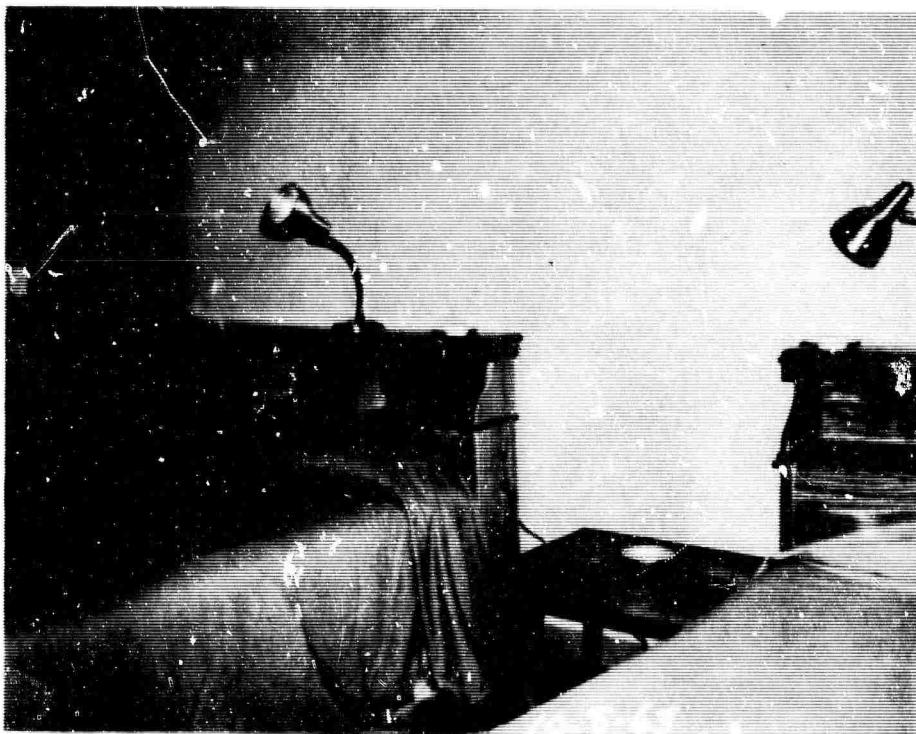


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Photo No. 3-3 (7) - Postshot - October 26, 1963

FRENCHMAN STATION

B-24

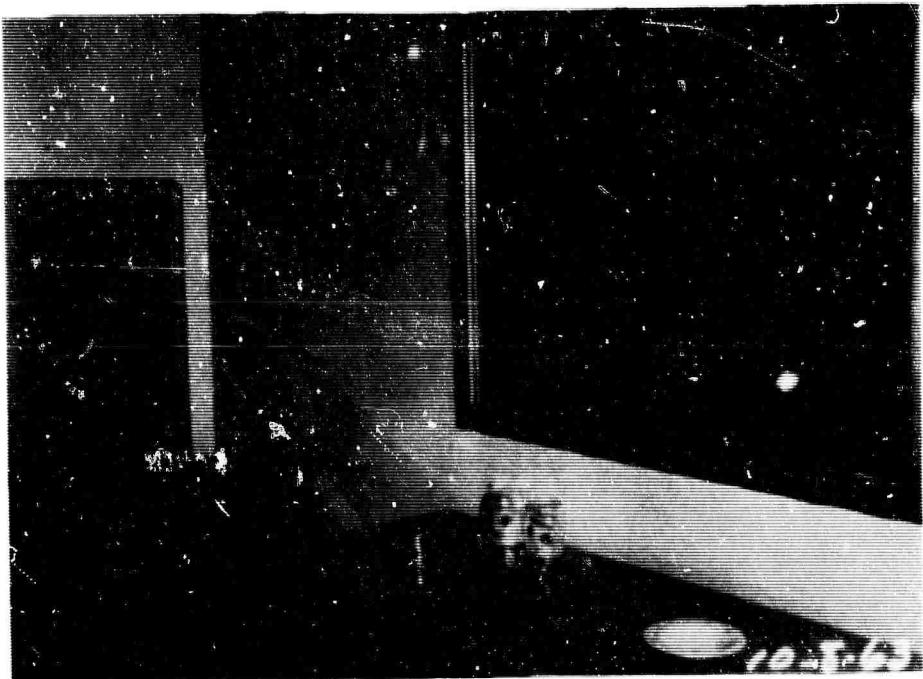


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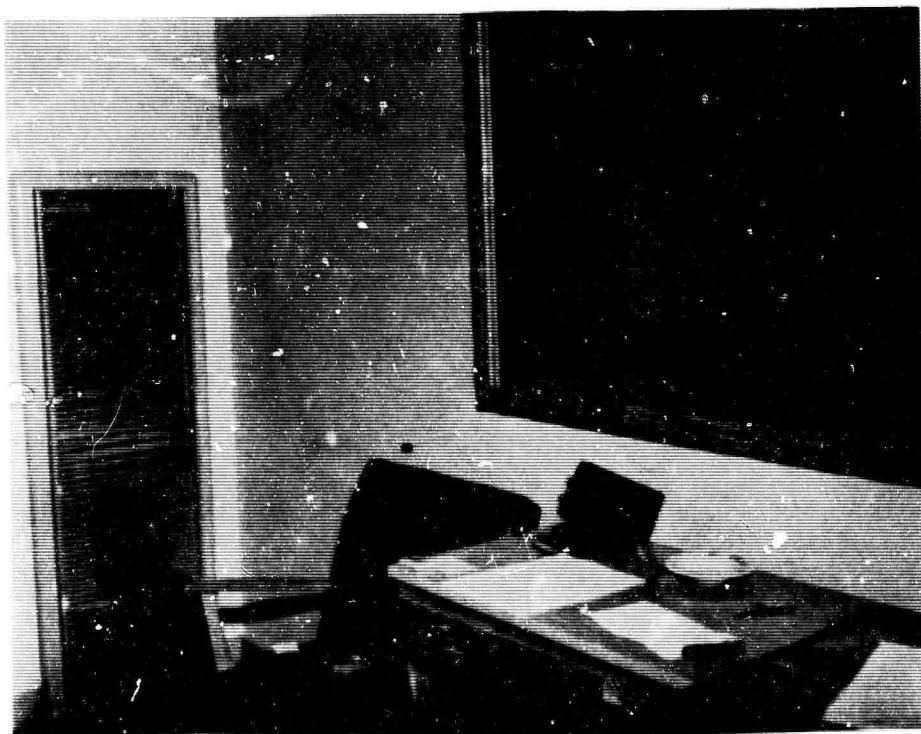


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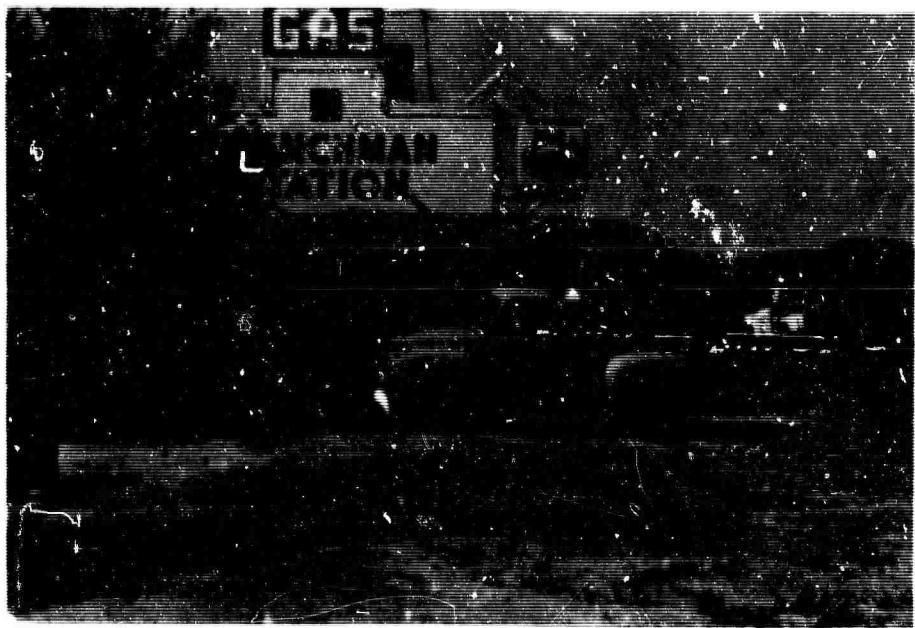


Photo No. 3-4 (1) - Preshot - September 23, 1963



Photo No. 3-4 (1) - Postshot - October 26, 1963

FRENCHMAN STATION

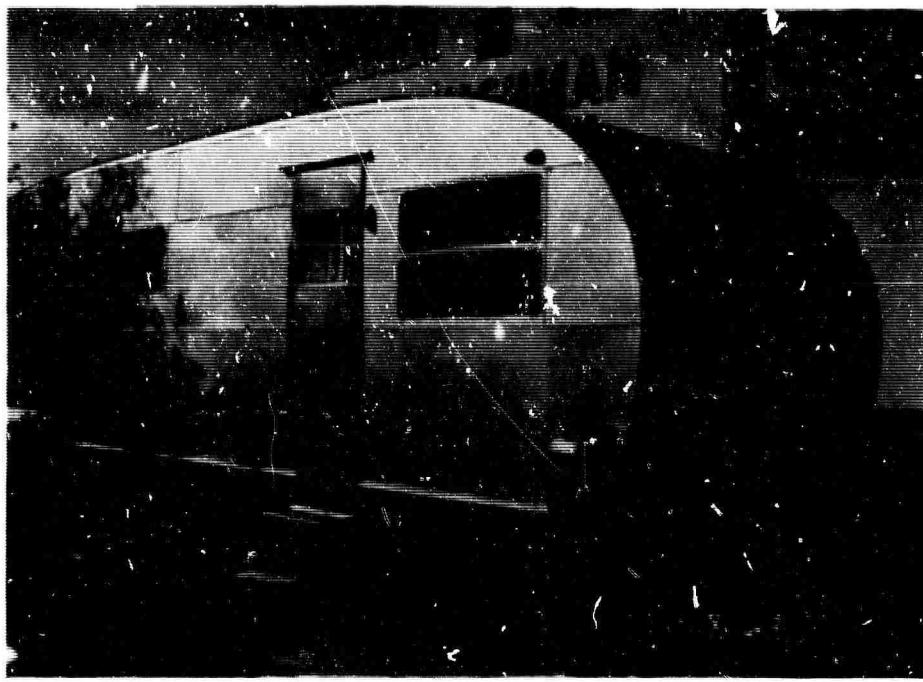


Photo No. 3-4 (2) - Preshot - October 8, 1963



Photo No. 3-4 (2) - Postshot - October 26, 1963

FRENCHMAN STATION



Photo No. 3-5 (1) - Preshot - September 23, 1963

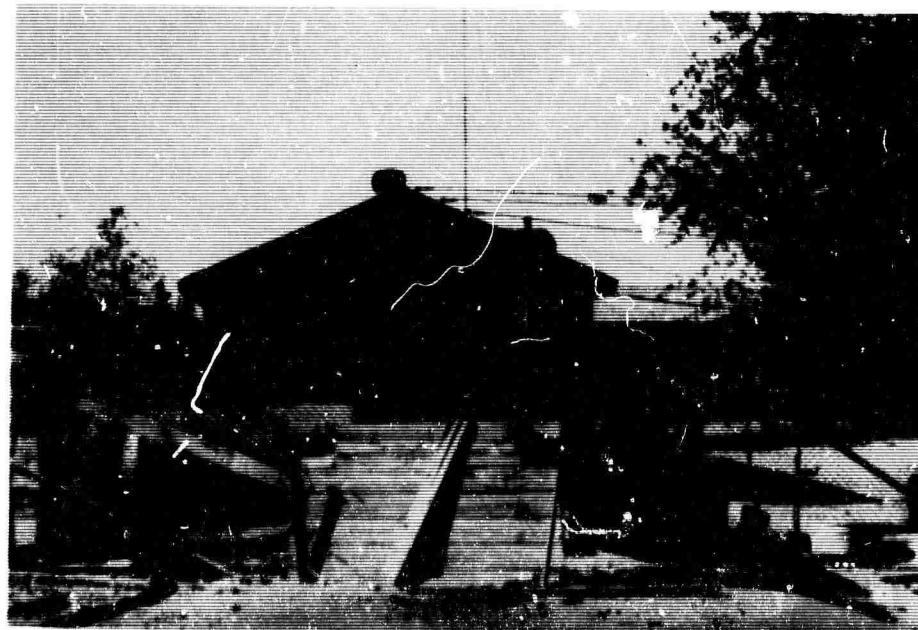


Photo No. 3-5 (1) - Postshot - October 26, 1963

FRENCHMAN STATION

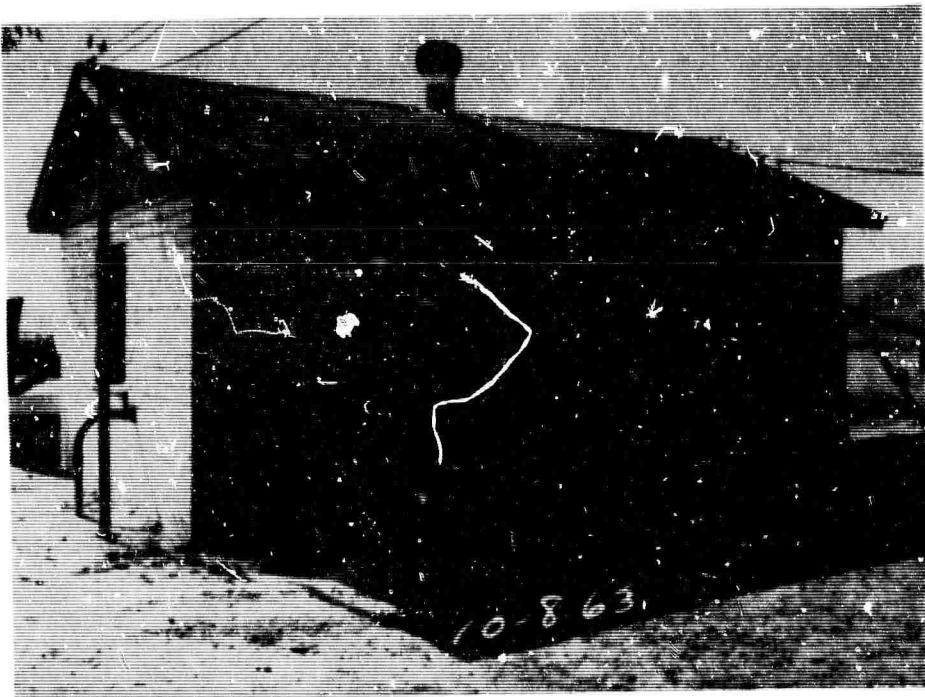


Photo No. 3-5 (2) - Preshot - October 8, 1963

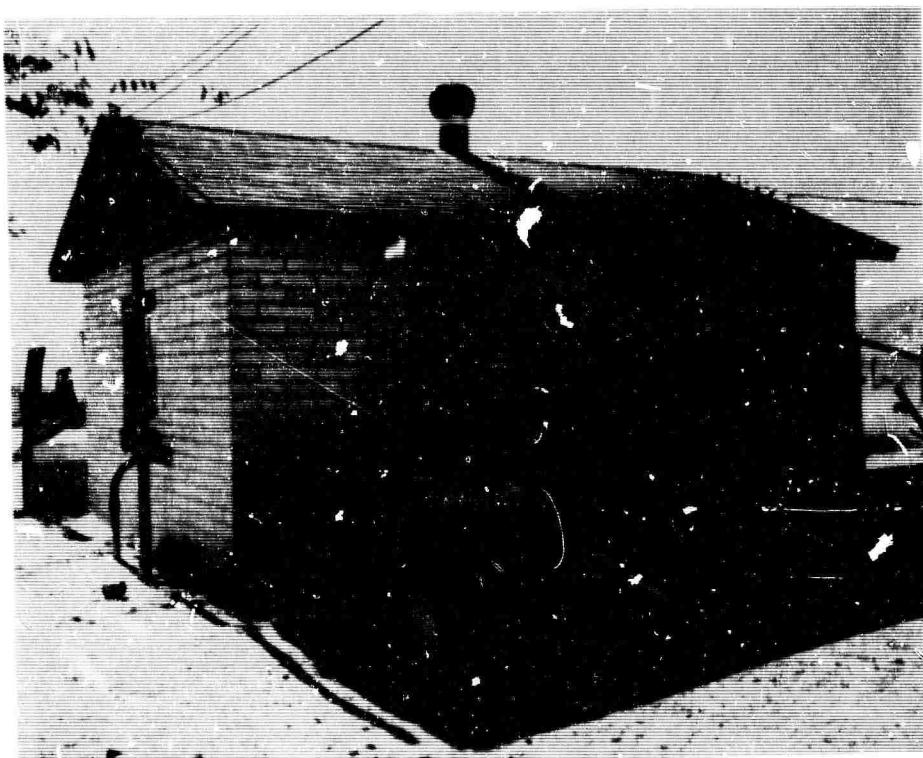


Photo No. 3-5 (2) - Postshot - October 26, 1963

FRENCHMAN STATION

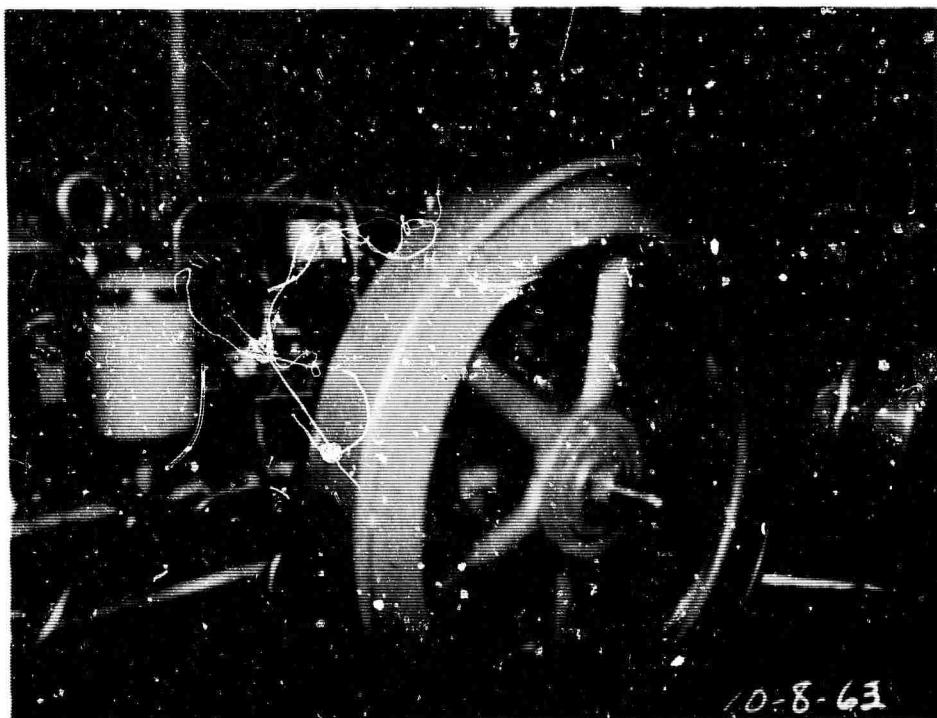


Photo No. 3-5 (3) - Preshot - October 8, 1963

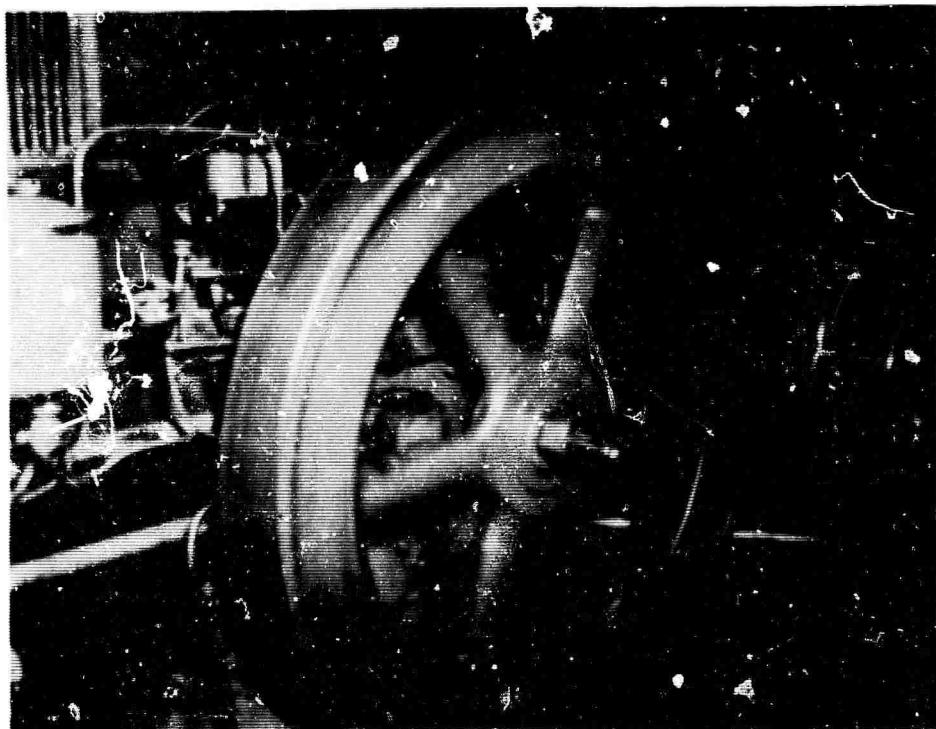


Photo No. 3-5 (3) - Postshot - October 26, 1963

FRENCHMAN STATION
B-57

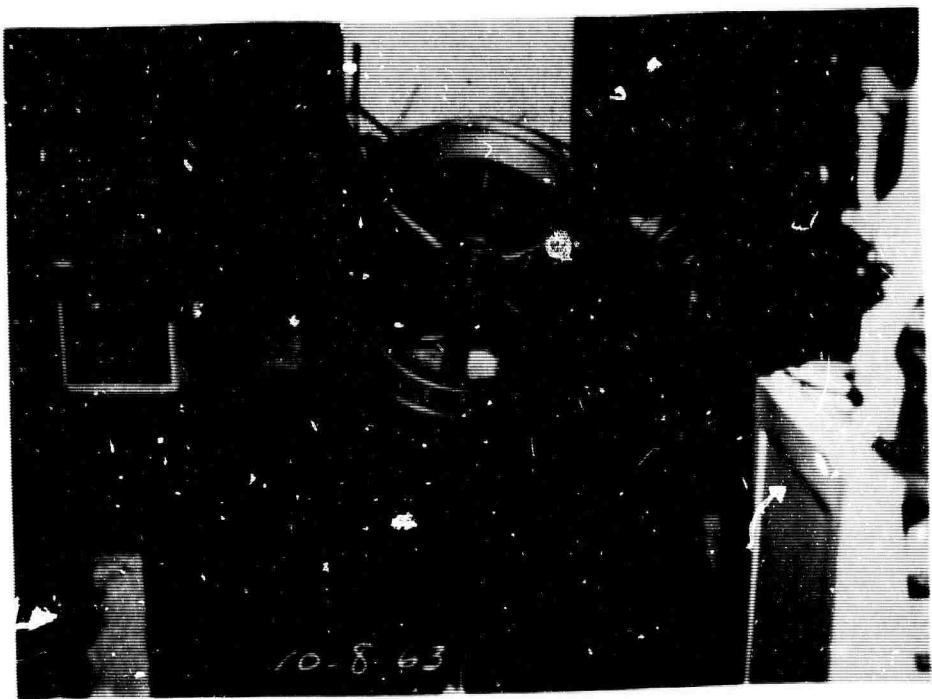


Photo No. 3-5 (4) - Preshot - October 8, 1963



Photo No. 3-5 (4) - Postshot - October 26, 1963

FRENCHMAN STATION

B-31

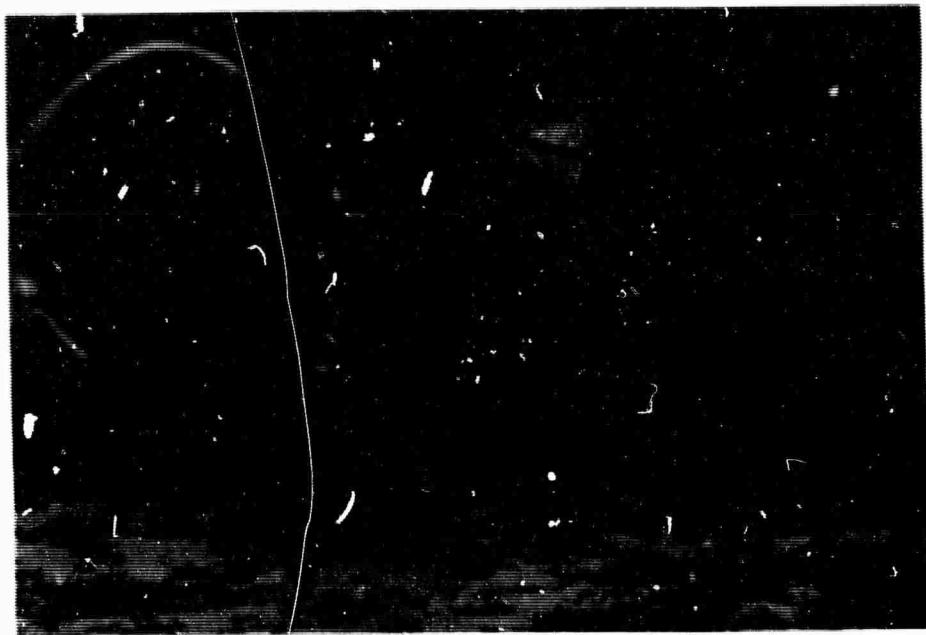


Photo No. 4-1 (1) - Preshot - September 23, 1963

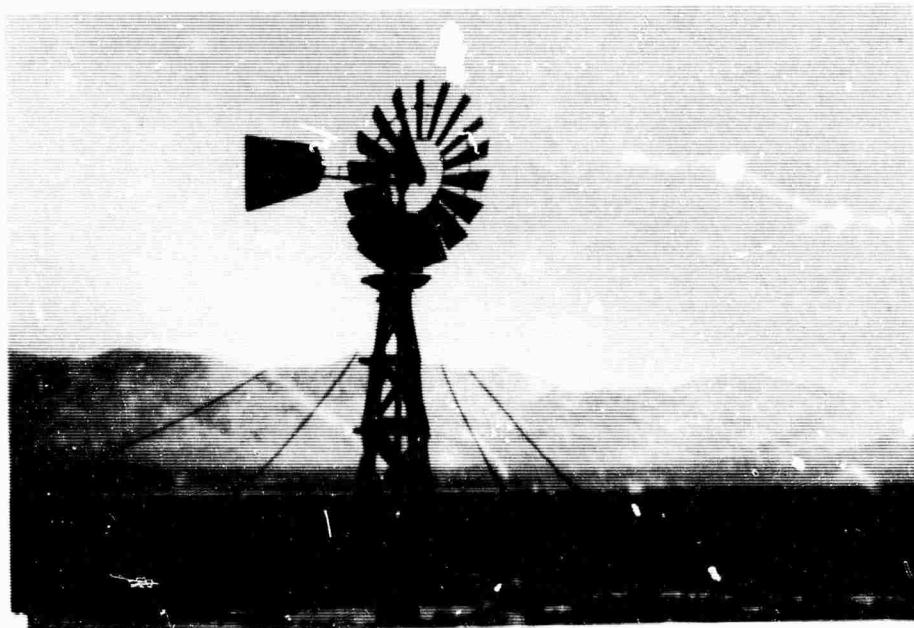


Photo No. 4-1 (1) - Postshot - November 4, 1963

WINDMILL



Photo No. 4-1 (2) - Preshot - September 23, 1963

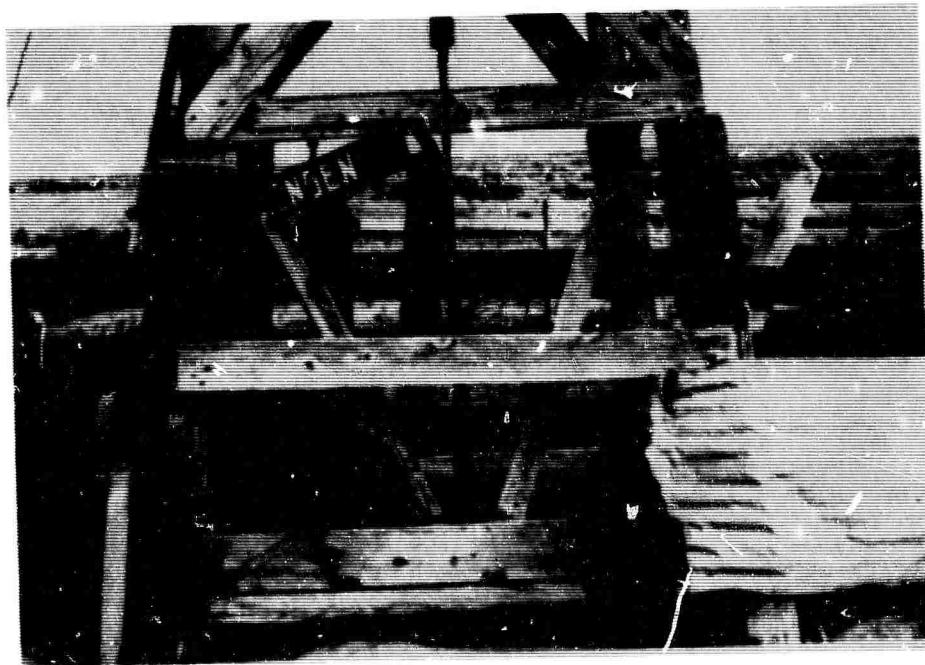


Photo No. 4-1 (2) - Postshot - November 4, 1963

WINDMILL

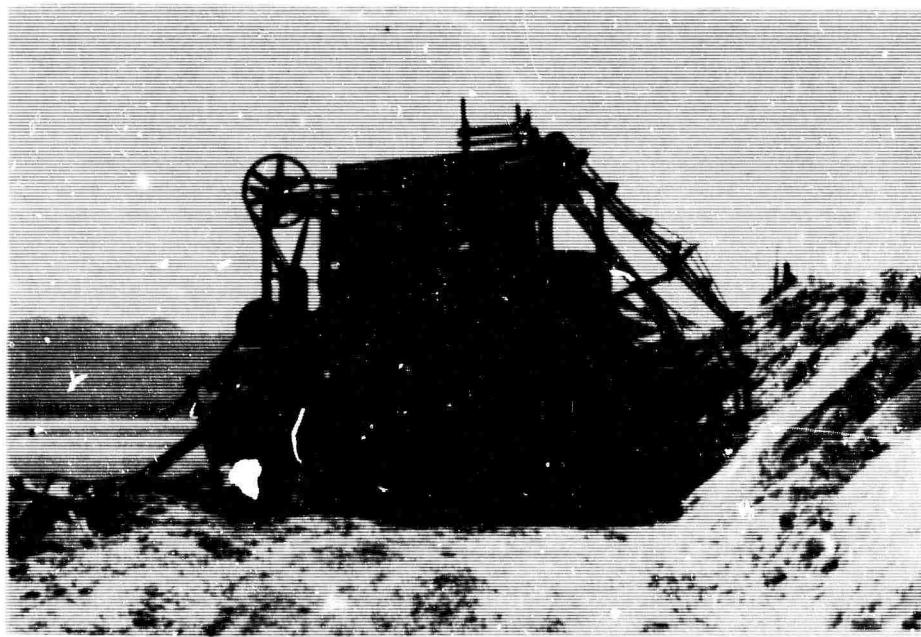


Photo No. 5-1 (1) - Preshot - September 24, 1963

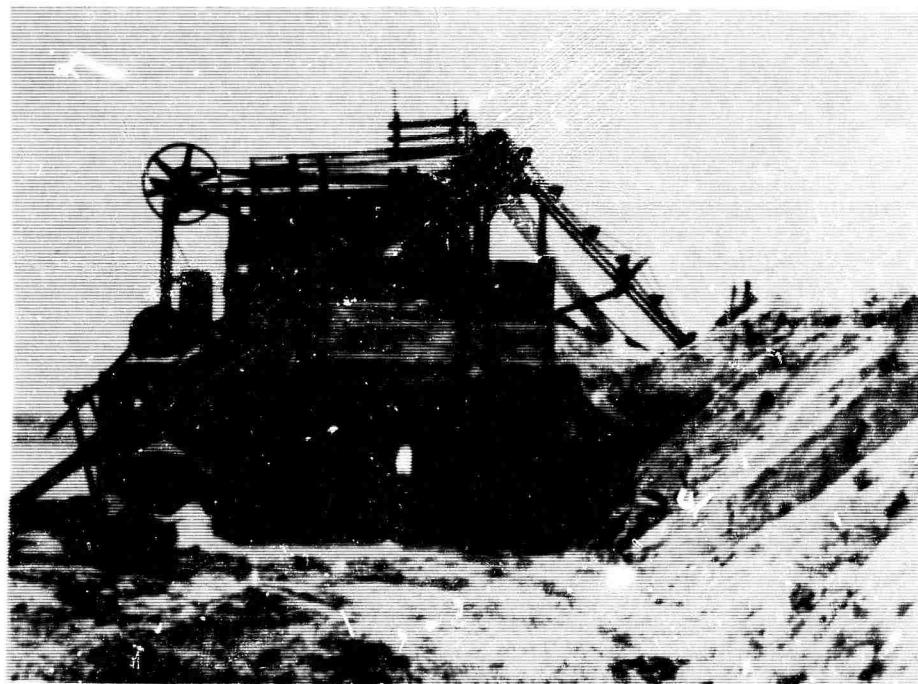


Photo No. 5-1 (1) - Postshot - November 4, 1963

SALT MILL

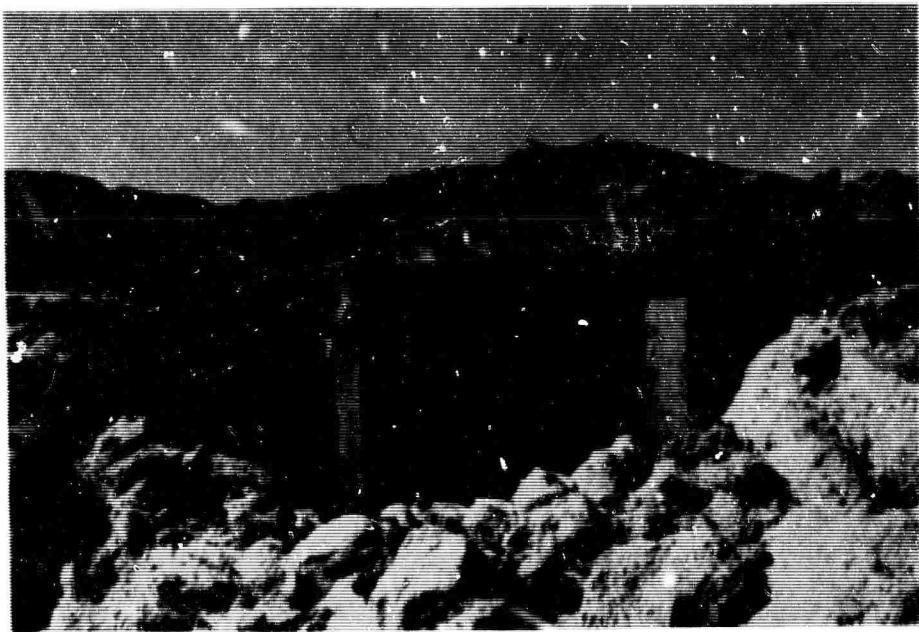


Photo No. 5-1 (2) - Preshot - September 24, 1963

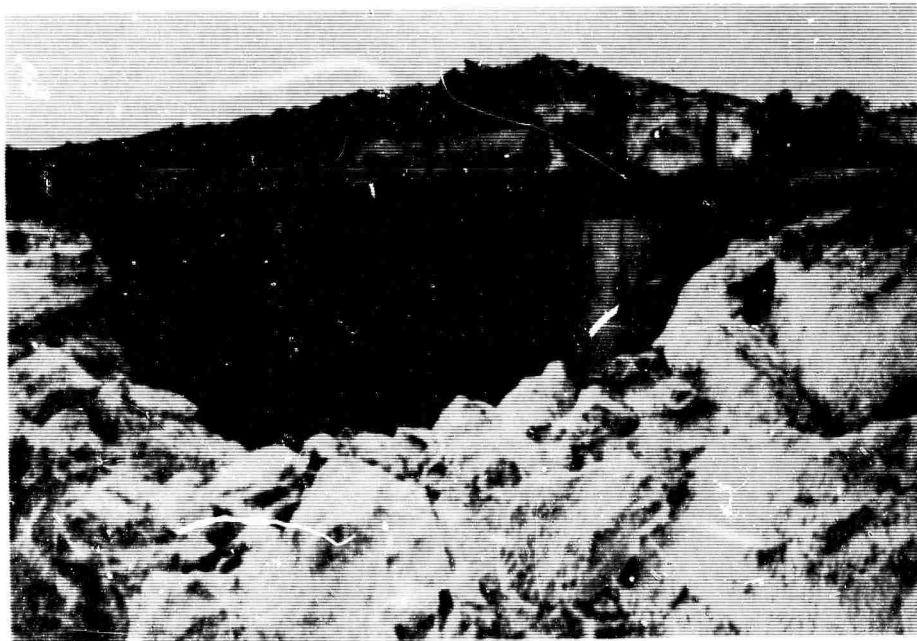


Photo No. 5-1 (2) - Postshot - November 4, 1963

SALT MILL

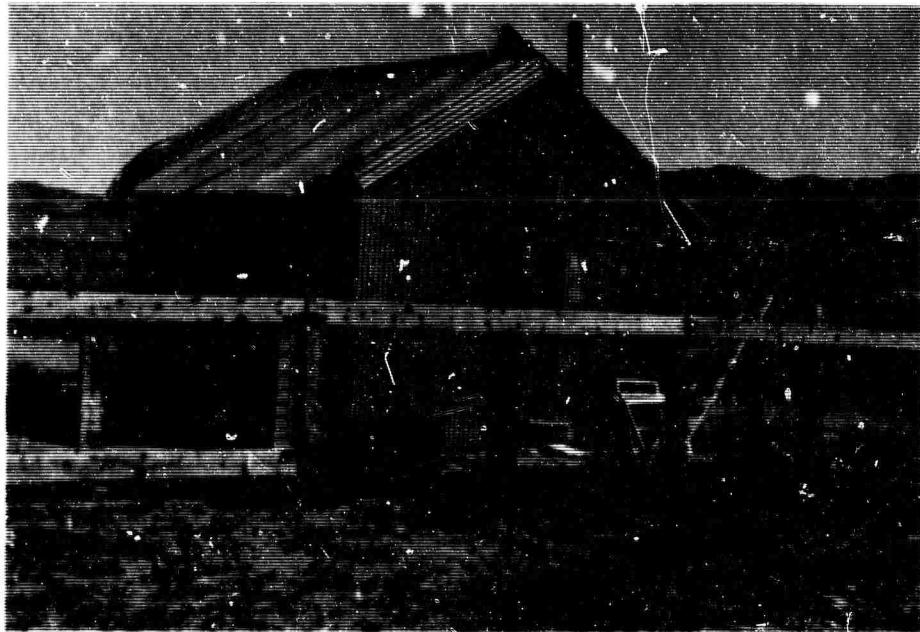


Photo No. 6-1 - Preshot - September 24, 1963

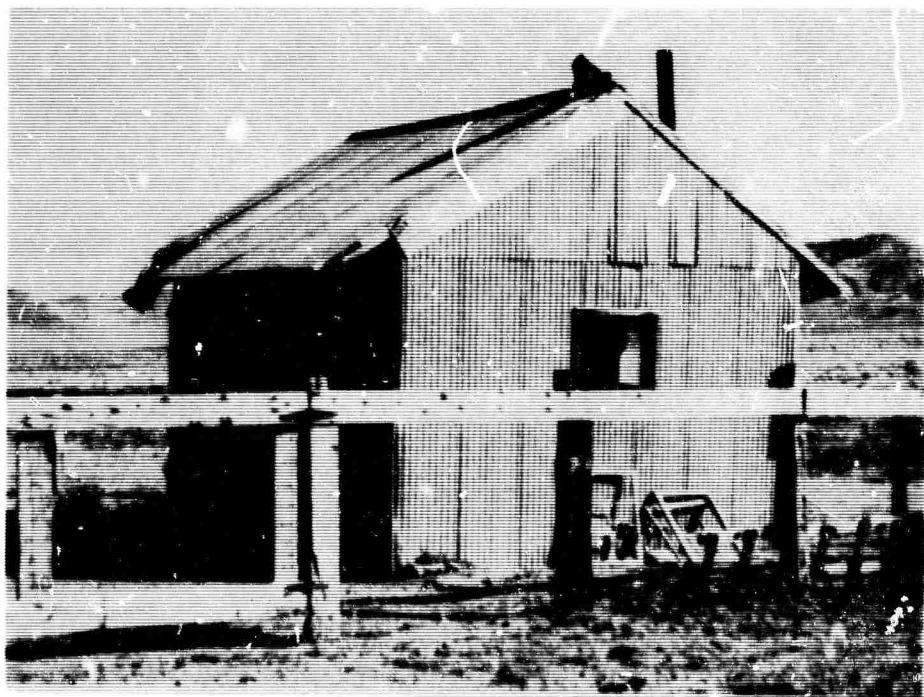


Photo No. 6-1 - Preshot - October 30, 1963

WINTER SHEEP CAMP

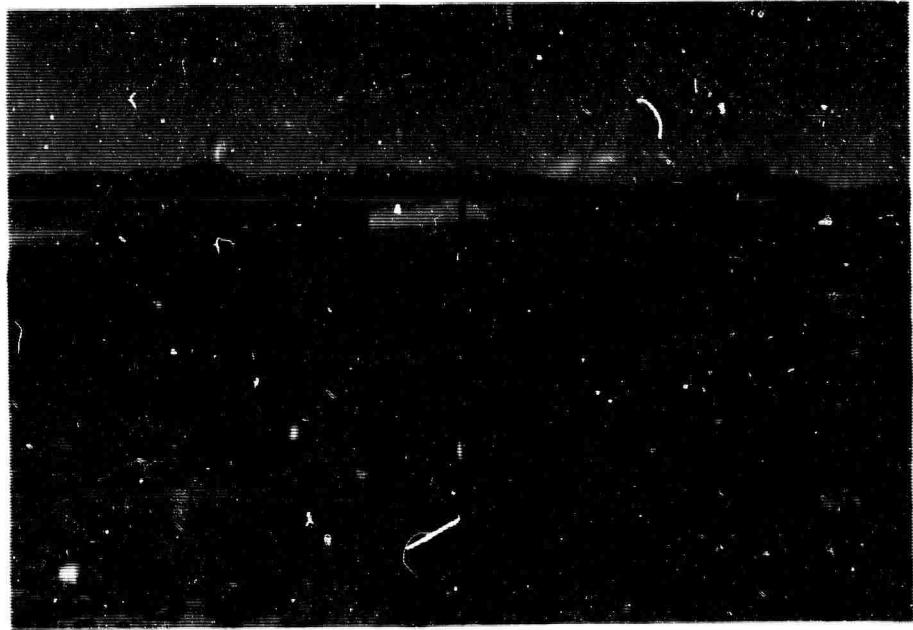


Photo No. 6-2 - Preshot - September 24, 1963

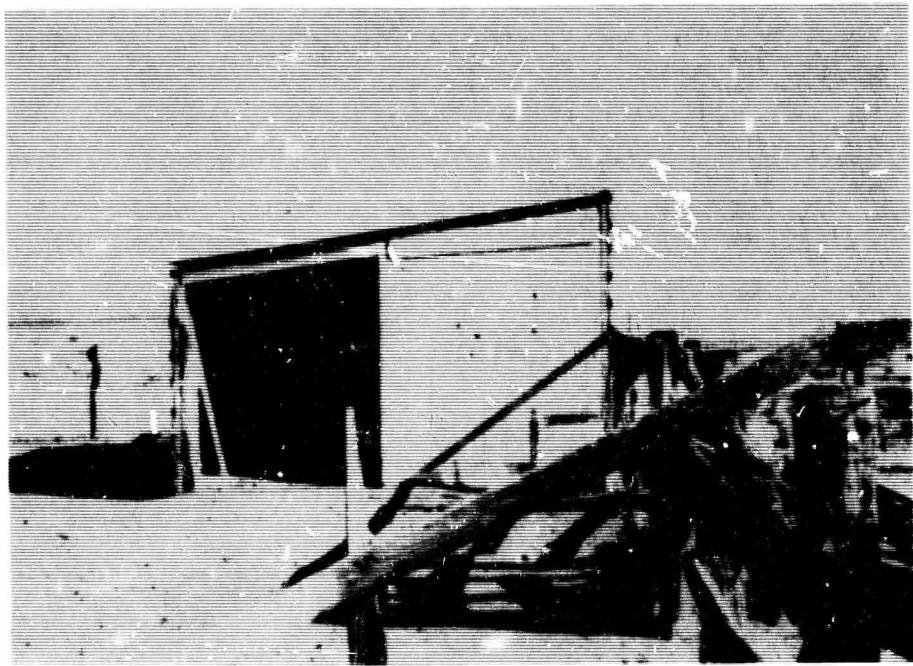


Photo No. 6-2 - Postshot - October 30, 1963

WINTER SHEEP CAMP

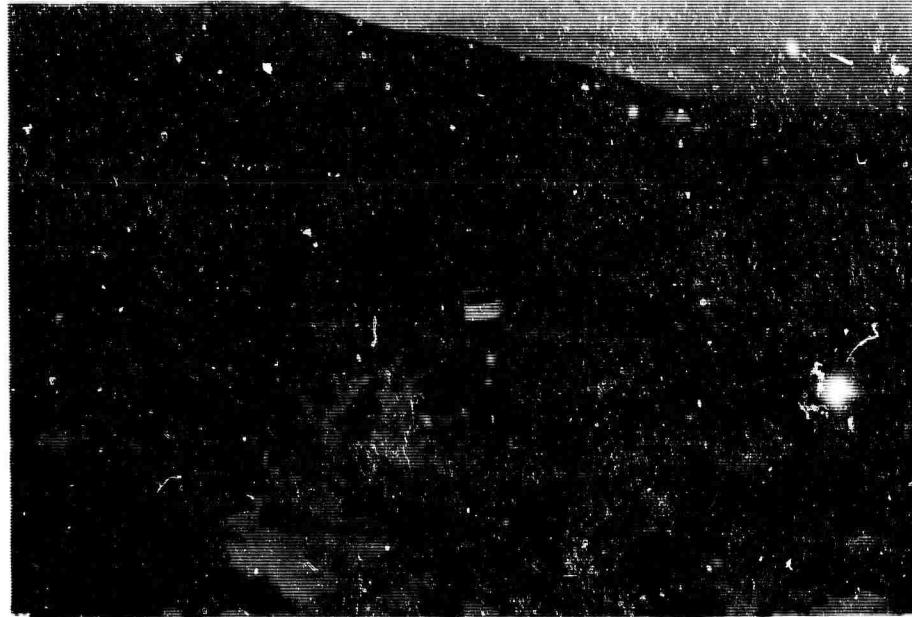


Photo No. 7-1 - Preshot - September 24, 1963



Photo No. 7-1 - Postshot - October 30, 1963

SHACK - THREE MILES SOUTH OF GZ



Photo No. 8-1 - Preshot - September 25, 1963



Photo No. 8-1 - Postshot - October 26, 1963

TUNGSTEN MILL



Photo No. 9-1 - Preshot - September 23, 1963

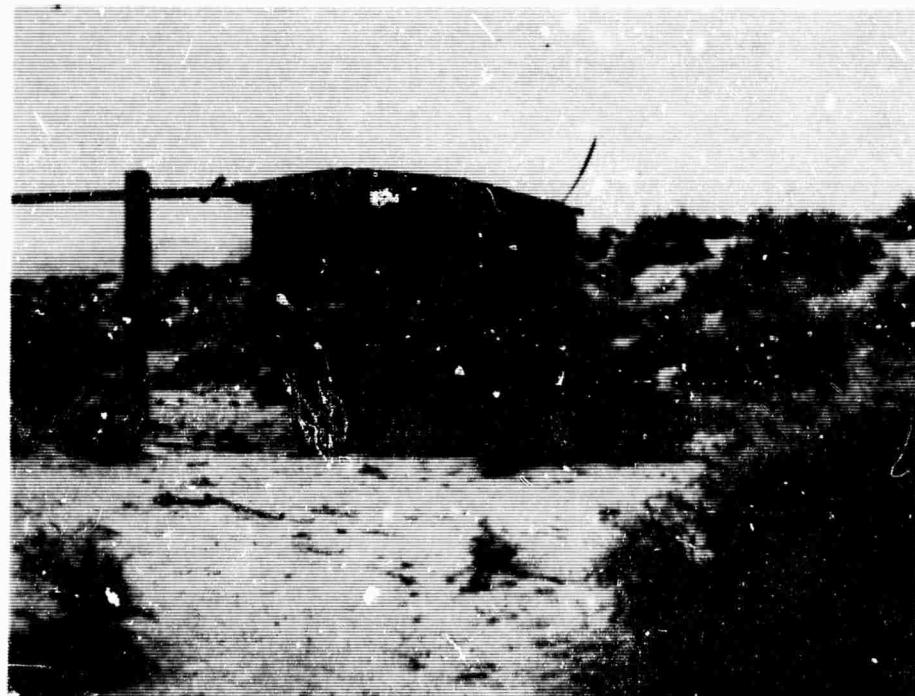


Photo No. 9-1 - Postshot - November 4, 1963

SHACK - FOUR MILES NW OF GZ

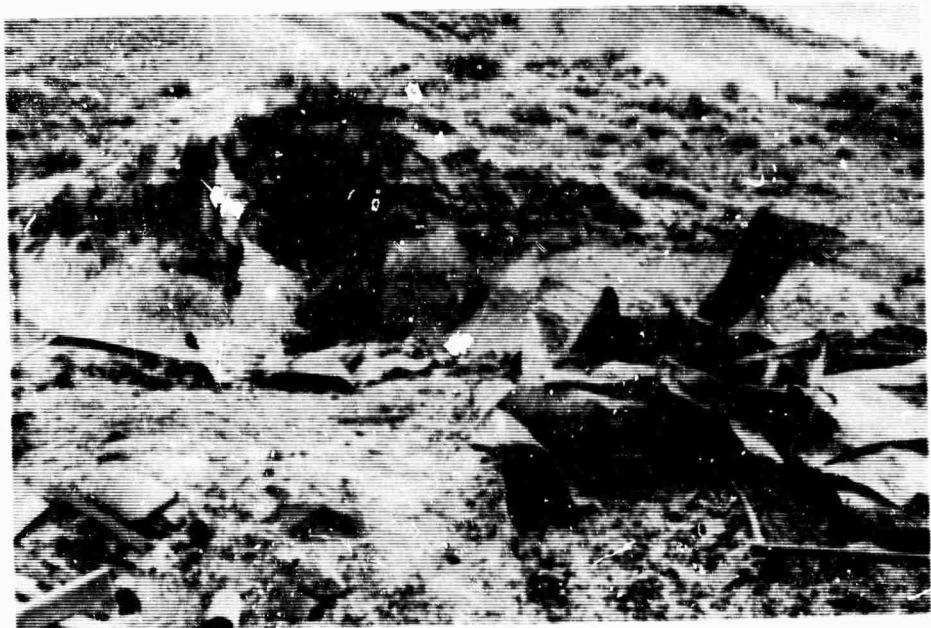


Photo No. 10-1 - Preshot - September 30, 1963



Photo No. 10-1 - Postshot - October 29, 1963

HOOVER CLAIMS

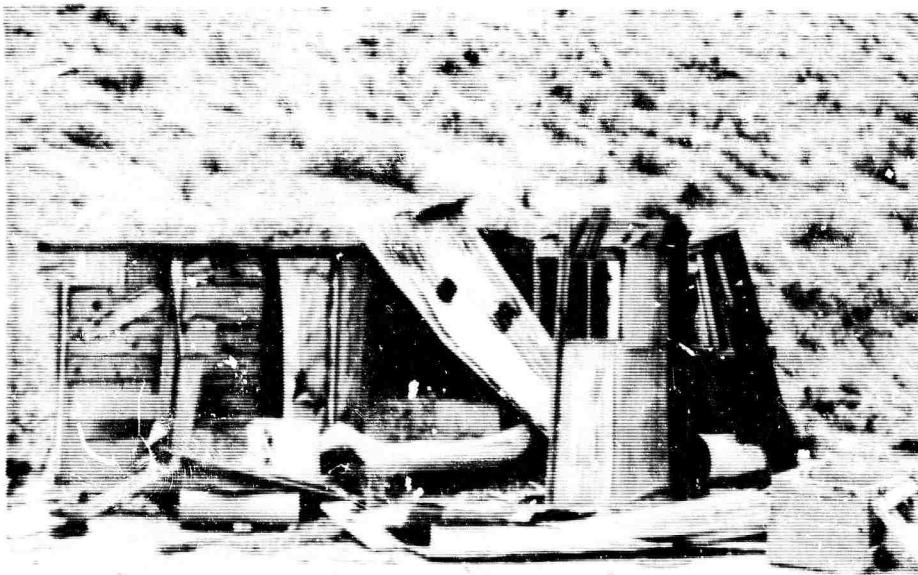


Photo No. 10-2 - Preshot - September 30, 1963



Photo No. 10-2 - Postshot - October 29, 1963

HOOVER CLAIMS



Photo No. 10-3 - Preshot - September 30, 1963



Photo No. 10-3 - Postshot - October 29, 1963

HOOVER CLAIMS

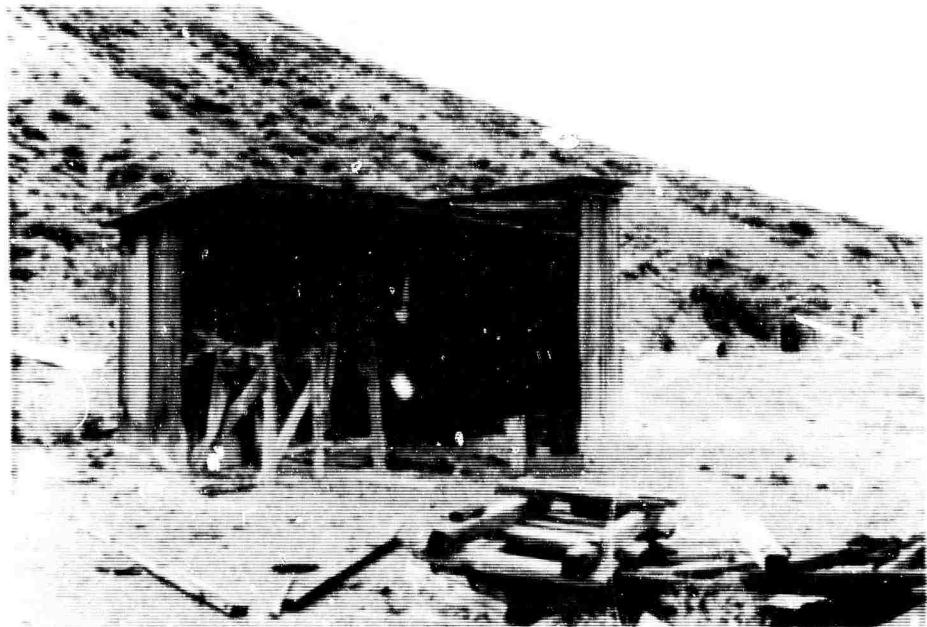


Photo No. 11-1 - Preshot - September 30, 1963

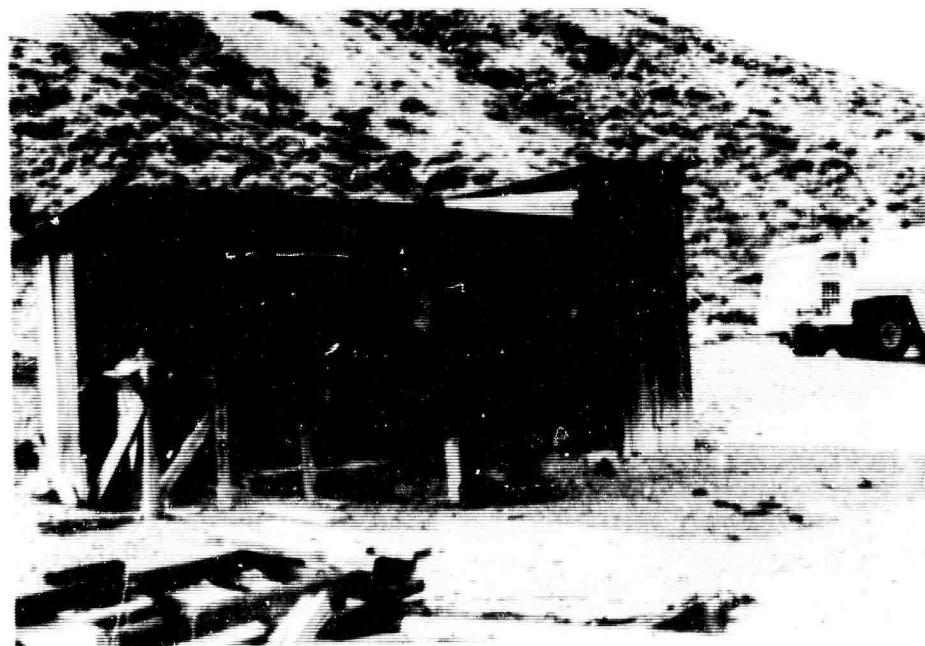


Photo No. 11-1 - Postshot - October 29, 1963

SUMMIT KING MINE



Photo No. 11-2 - Preshot - September 30, 1963



Photo No. 11-2 - Postshot - October 29, 1963

SUMMIT KING MINE

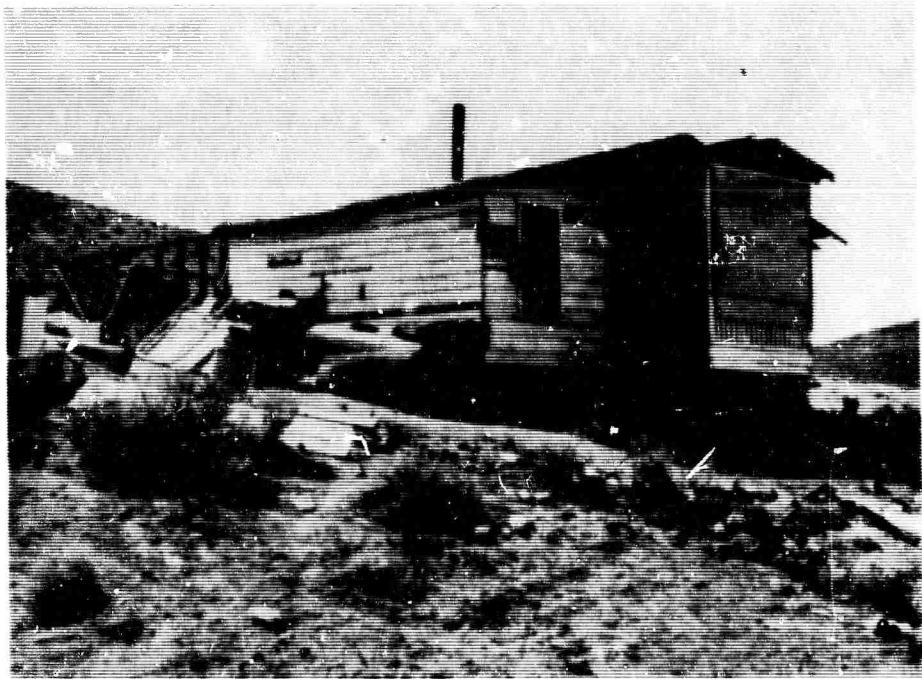


Photo No. 12-1 - Preshot - September 30, 1963



Photo No. 12-1 - Postshot - October 29, 1963

NORTHERN DIPPER MINE



Photo No. 12-2

Preshot

September



Photo No. 12-2

Postshot

October 29, 1963

NORTHERN DIPPER MINE

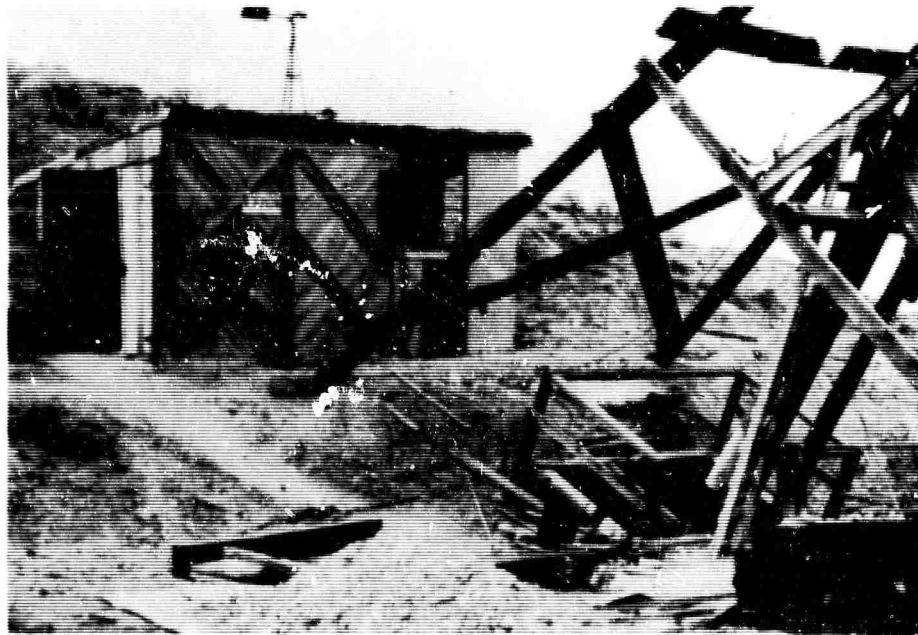


Photo No. 12-3 - Preshot - September 30, 1963

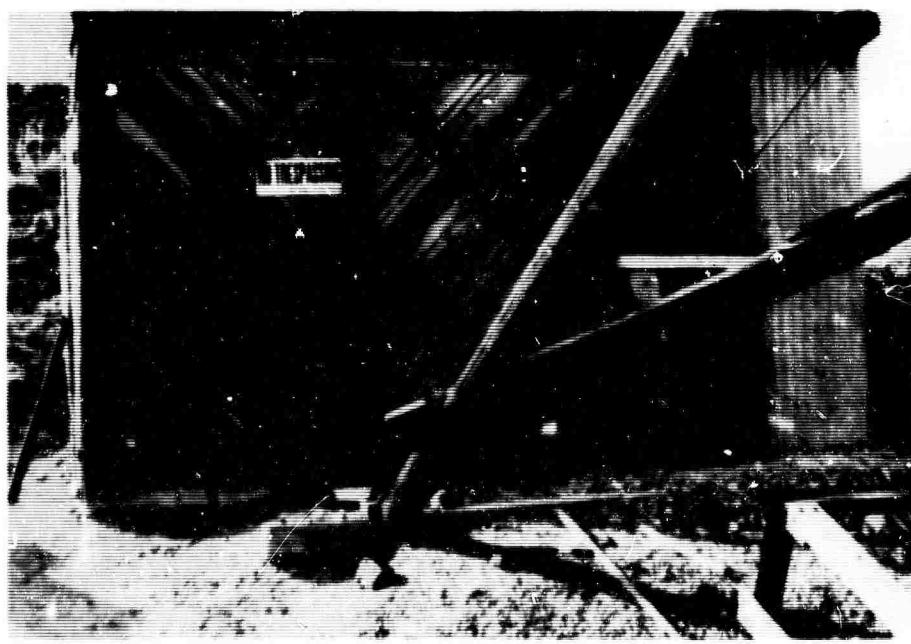


Photo No. 12-3 - Postshot - October 29, 1963

NORTHERN DIPPER MINE

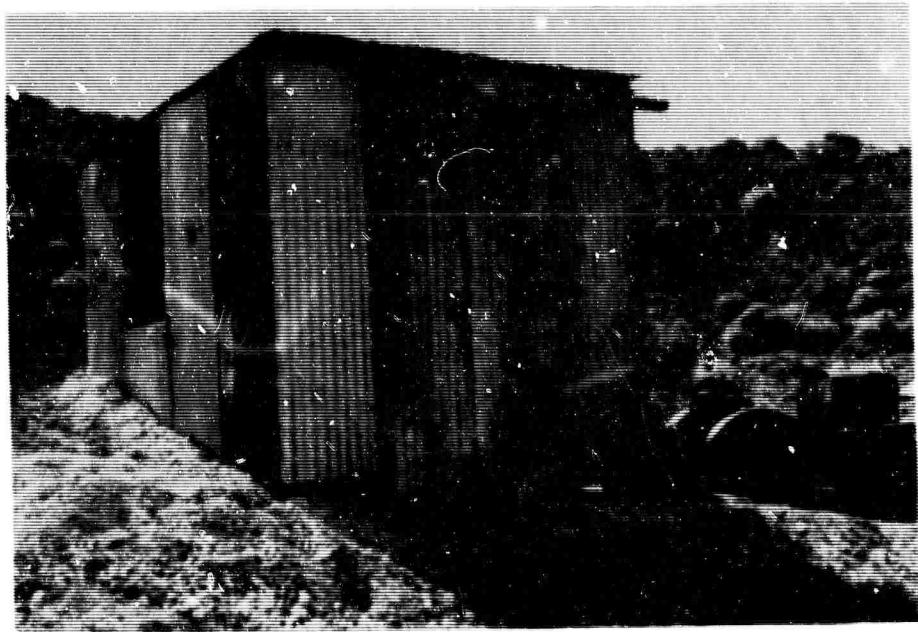


Photo No. 12-4 - Preshot - September 30, 1963

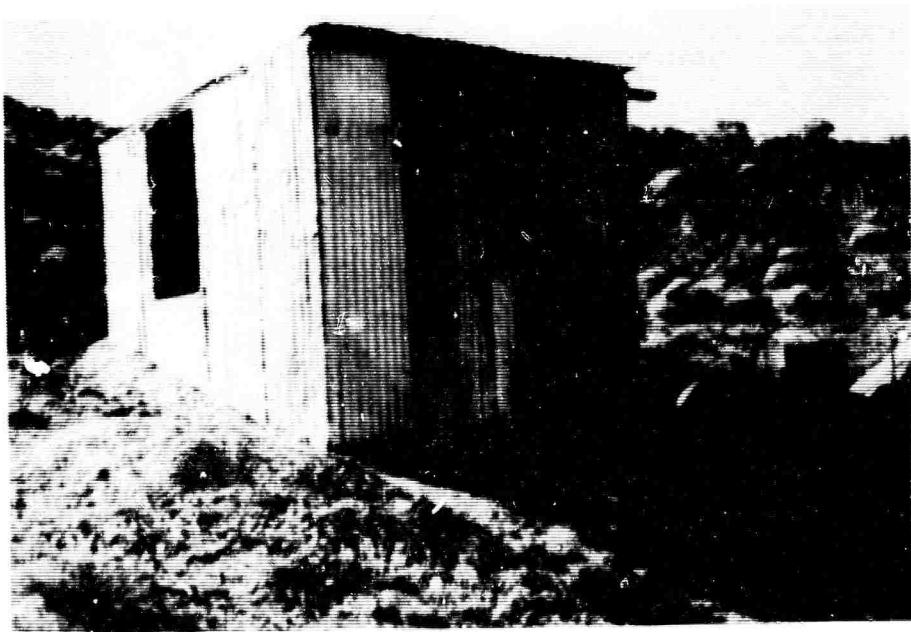


Photo No. 12-4 - Postshot - October 29, 1963

NORTHERN DIPPER MINE

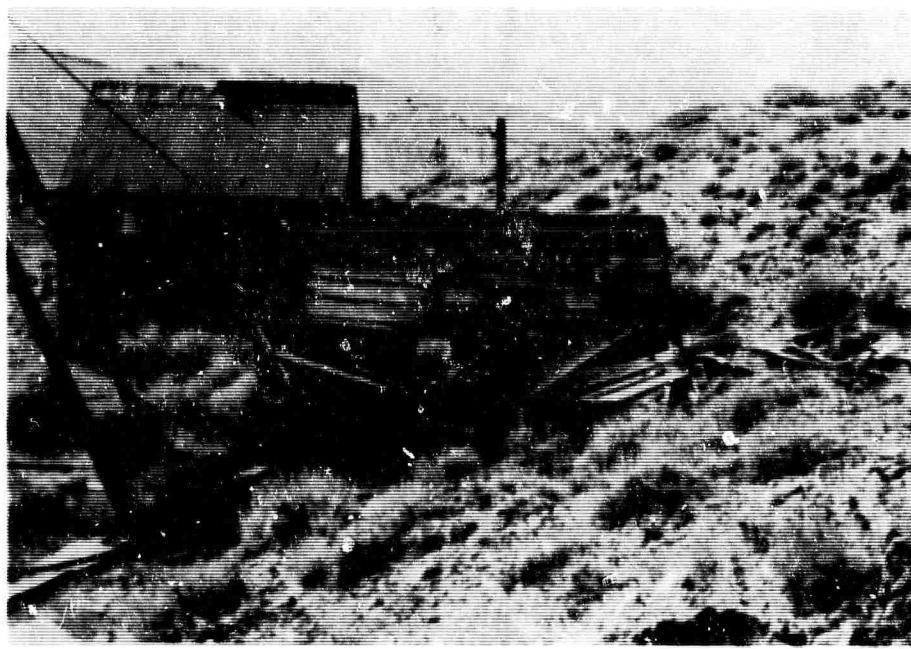


Photo No. 13-1 - Preshot - September 30, 1963

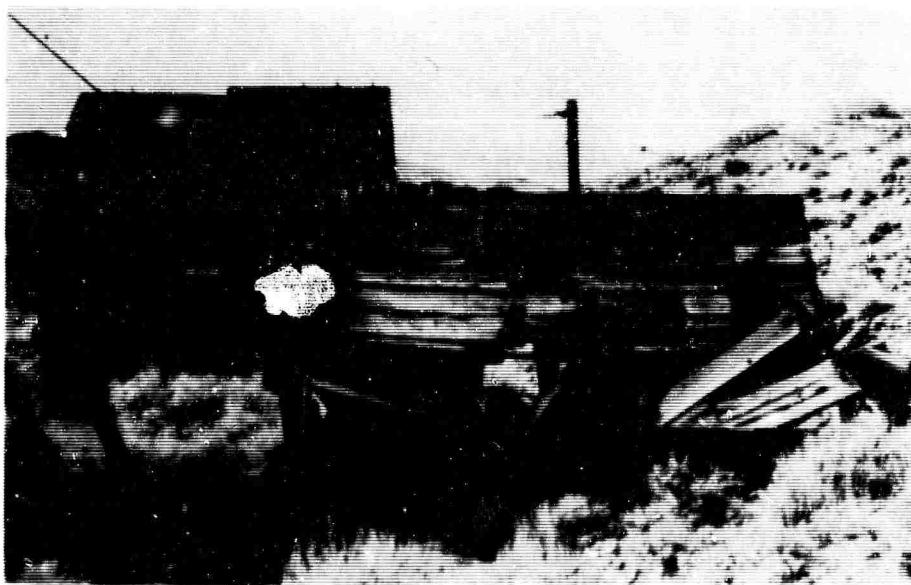


Photo No. 13-1 - Postshot - October 29, 1963

DROMEDARY HUMP MINE

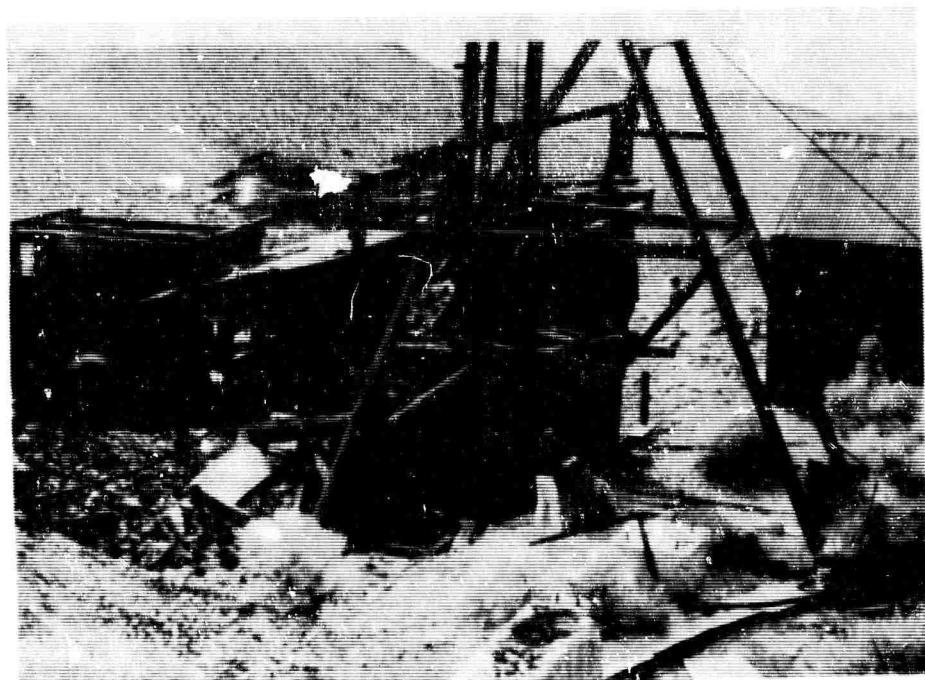


Photo No. 13-2 - Preshot - September 30, 1963

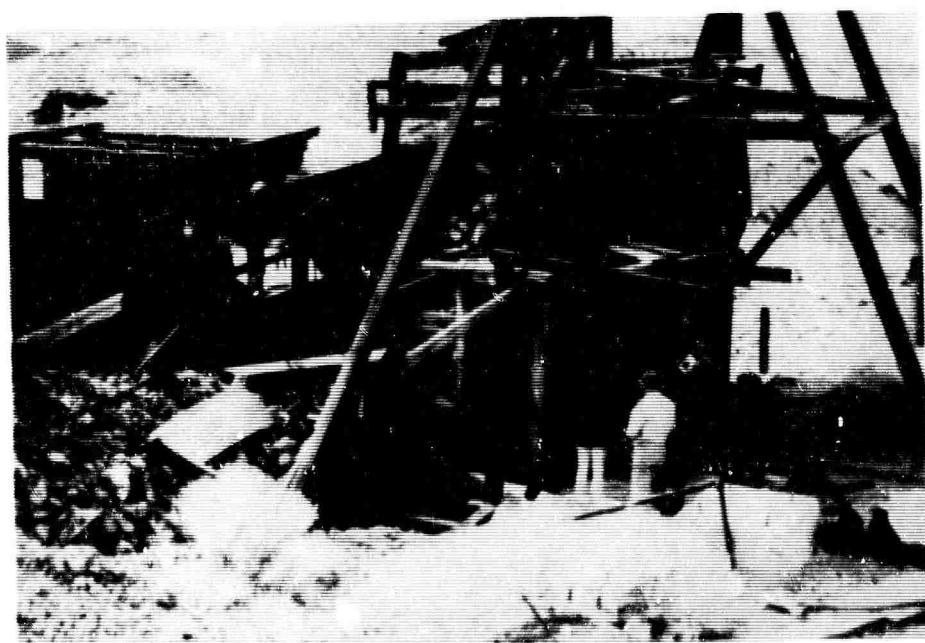


Photo No. 13-2 - Postshot - October 29, 1963

DROMEDARY HUMP MINE

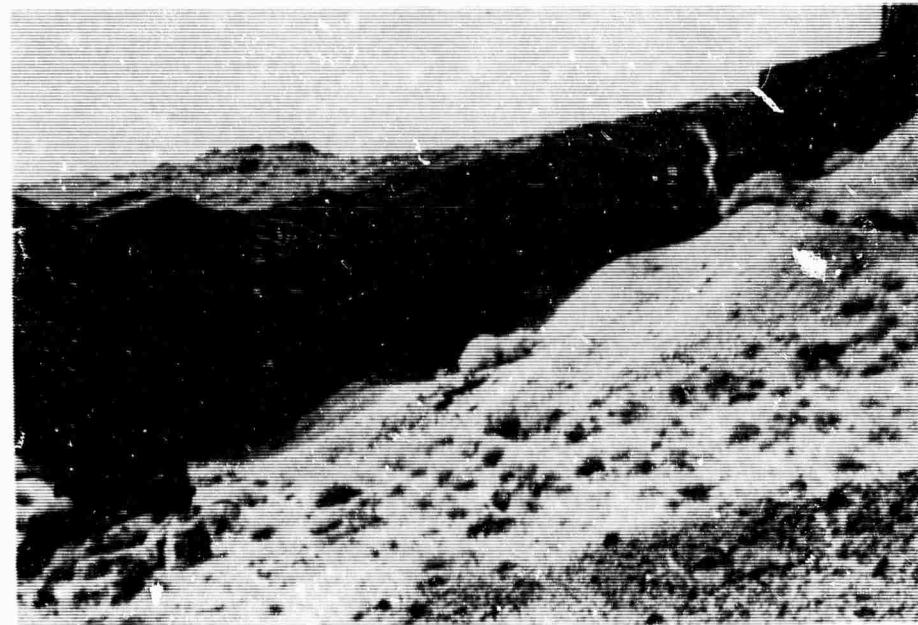


Photo No. 13-3 - Preshot - September 30, 1963

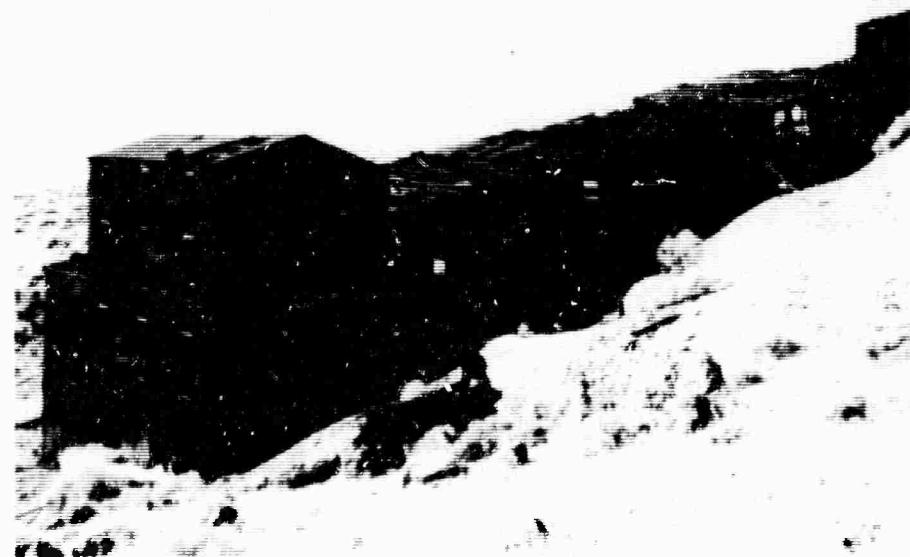


Photo No. 13-3 - Postshot - October 29, 1963

DROMEDARY HUMP MINE



Photo No. 13-4 - Preshot - September 30, 1963

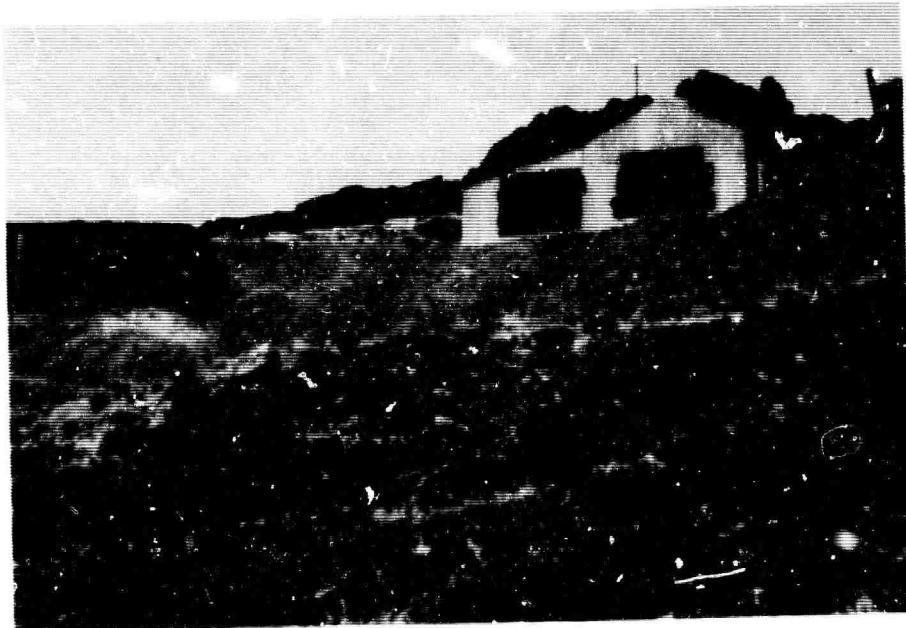


Photo No. 13-4 - Postshot - October 29, 1963

DROMEDARY HUMP MINE

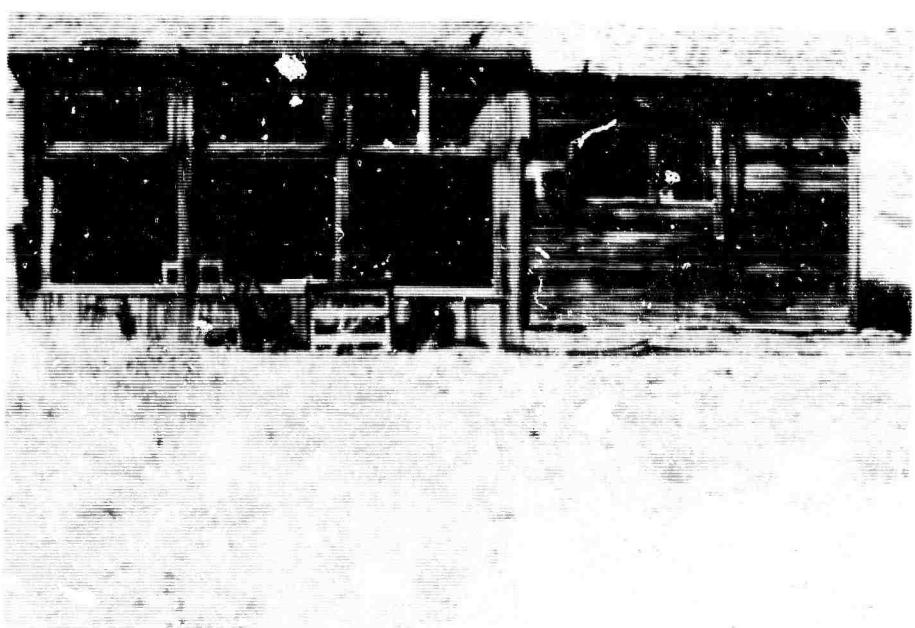


Photo No. 13-6 - Preshot - September 30, 1963

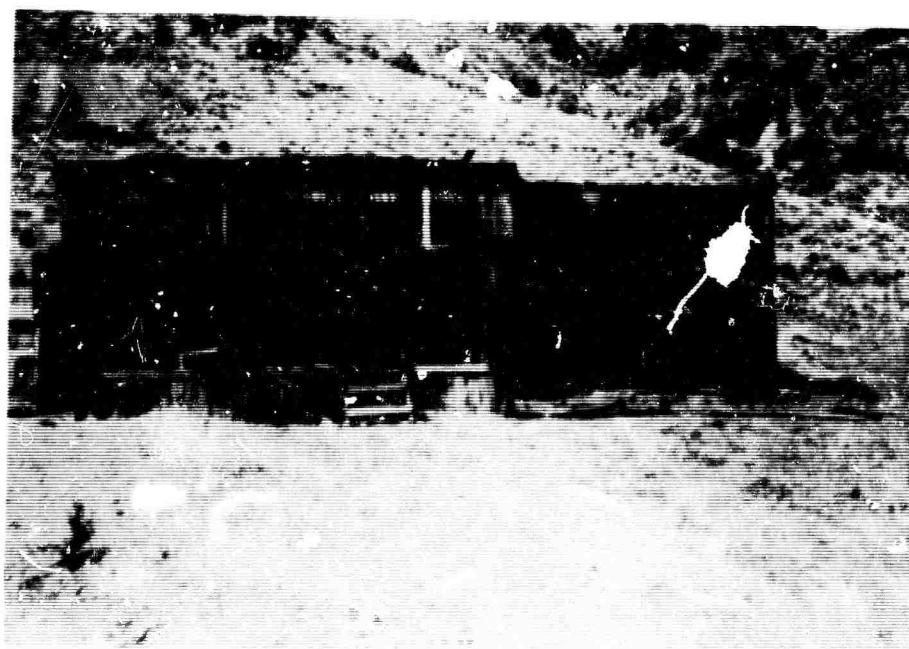


Photo No. 13-6 - Postshot - October 29, 1963

DROMEDARY HUMP MINE



Photo No. 13-7 - Preshot - September 30, 1963



Photo No. 13-7 - Postshot - October 29, 1963

DROMEDARY HUMP MINE

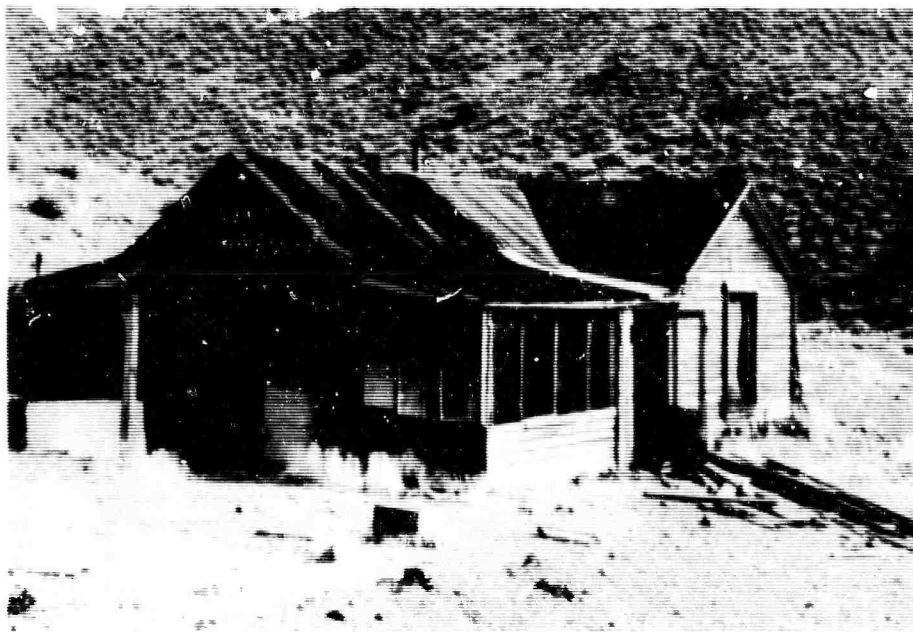


Photo No. 13-8 - Preshot - September 30, 1963



Photo No. 13-8 - Postshot - October 29, 1963

DROMEDARY HUMP MINE

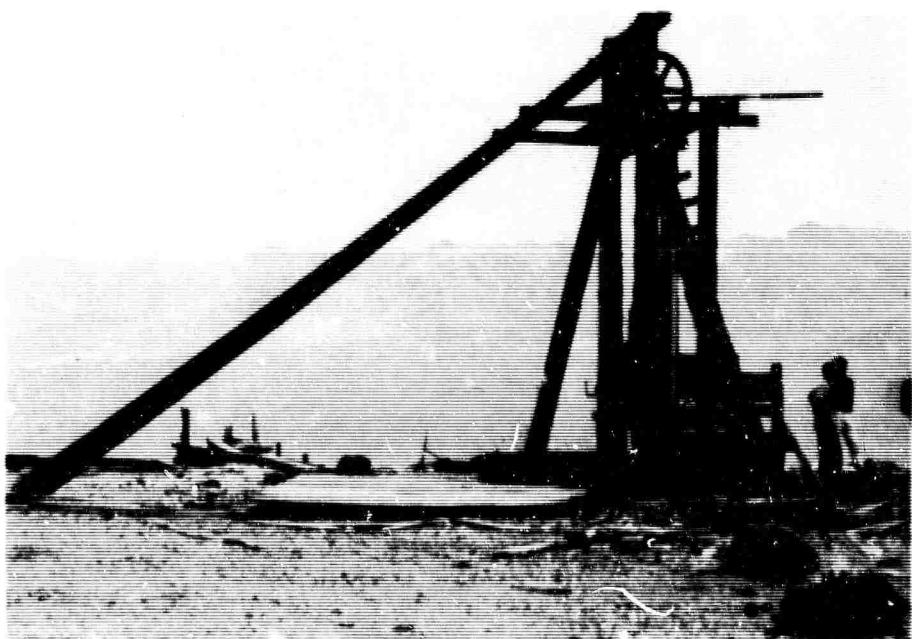


Photo No. 14-1 - Preshot - September 30, 1963

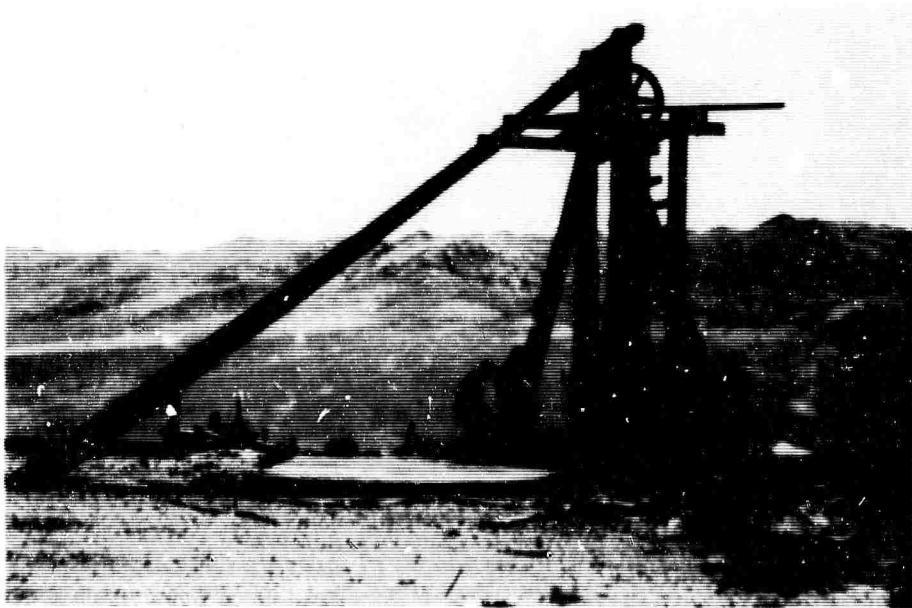


Photo No. 14-1 - Postshot - October 29, 1963

ALDONA MINE

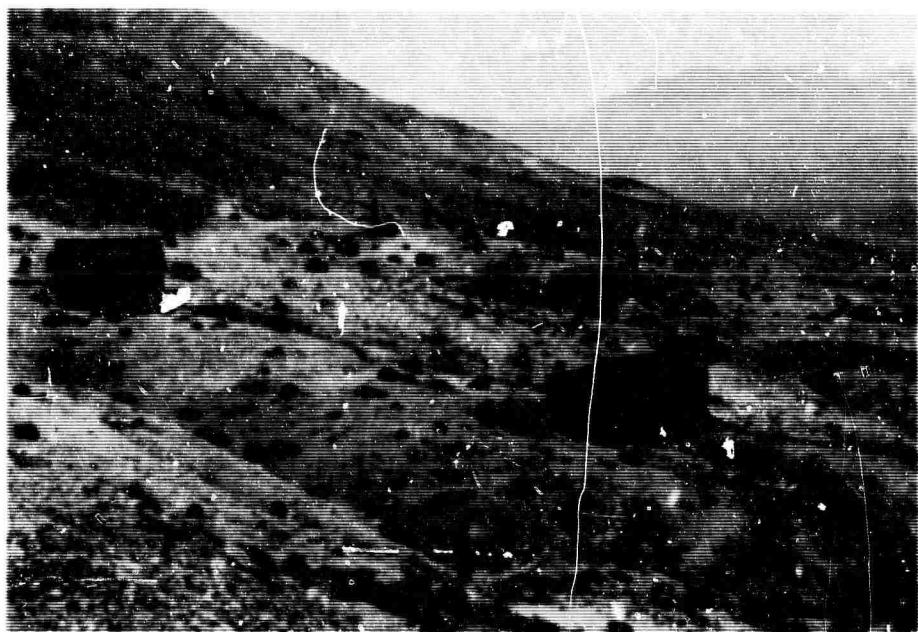


Photo No. 14-2 - Preshot - September 30, 1963



Photo No. 14-2 - Postshot - October 29, 1963

ALDONA MINE

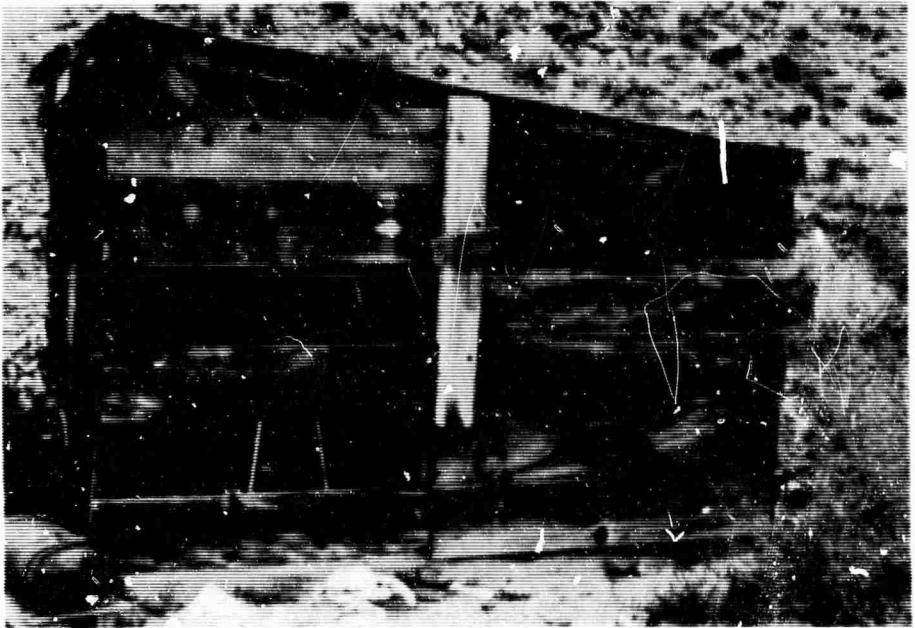


Photo No. 15-1 - Preshot - September 30, 1963

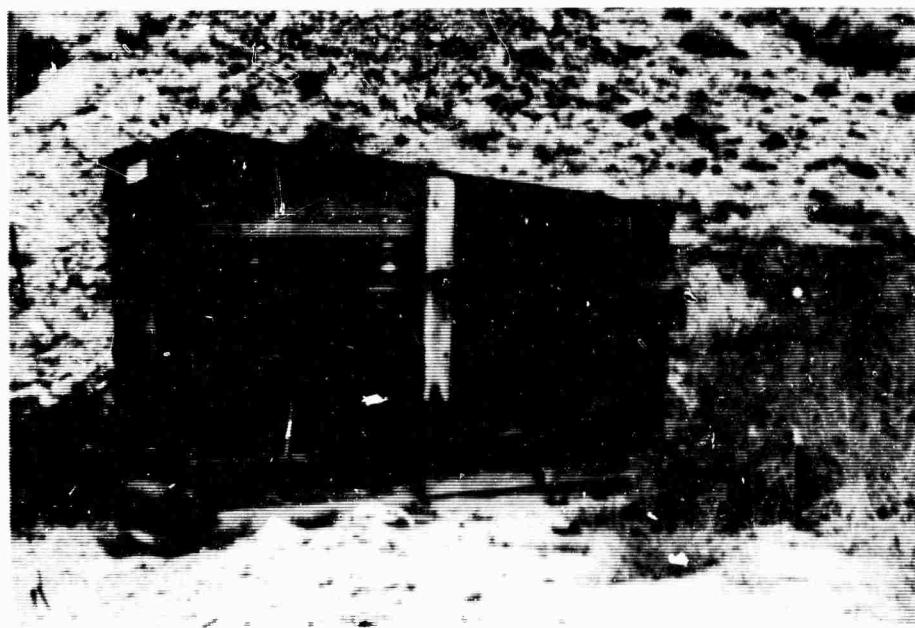


Photo No. 15-1 - Postshot - October 29, 1963

BEN MATHEWS SHAFT

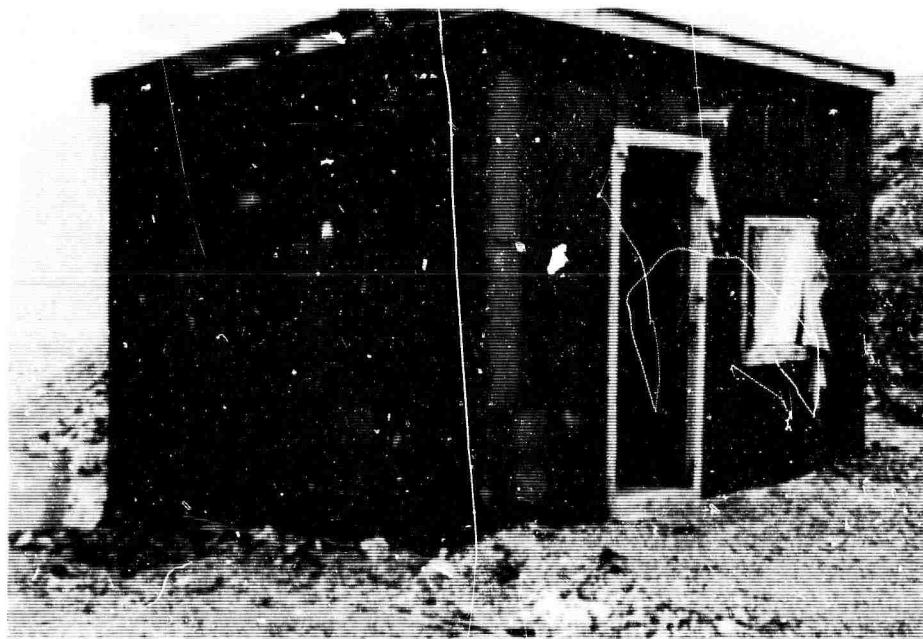


Photo No. 15-2 - Preshot - September 30, 1963



Photo No. 15-2 - Postshot - October 29, 1963

BEN MATHEWS SHAFT

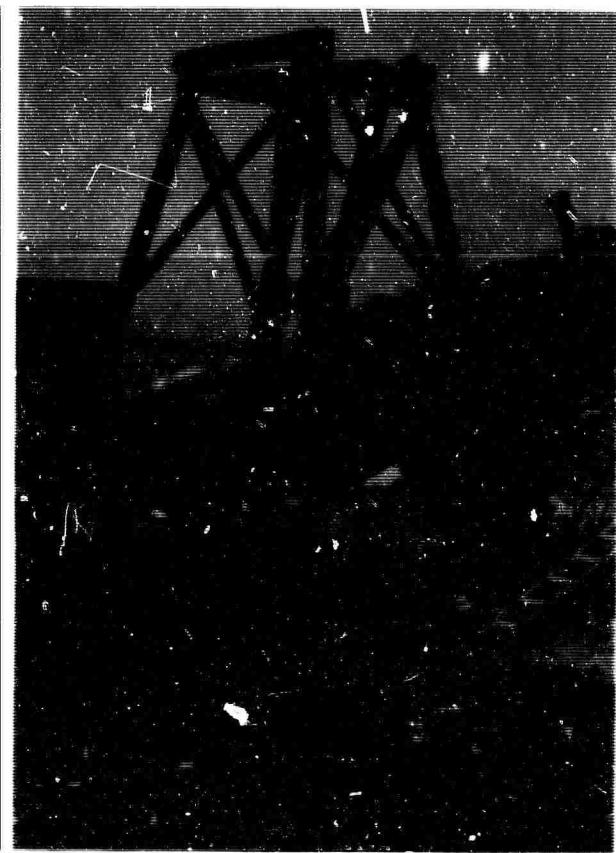


Photo No. 15-3

Preshot

September 30, 1963



Photo No. 15-3

Postshot

October 29, 1963

BEN MATHEWS SHAFT

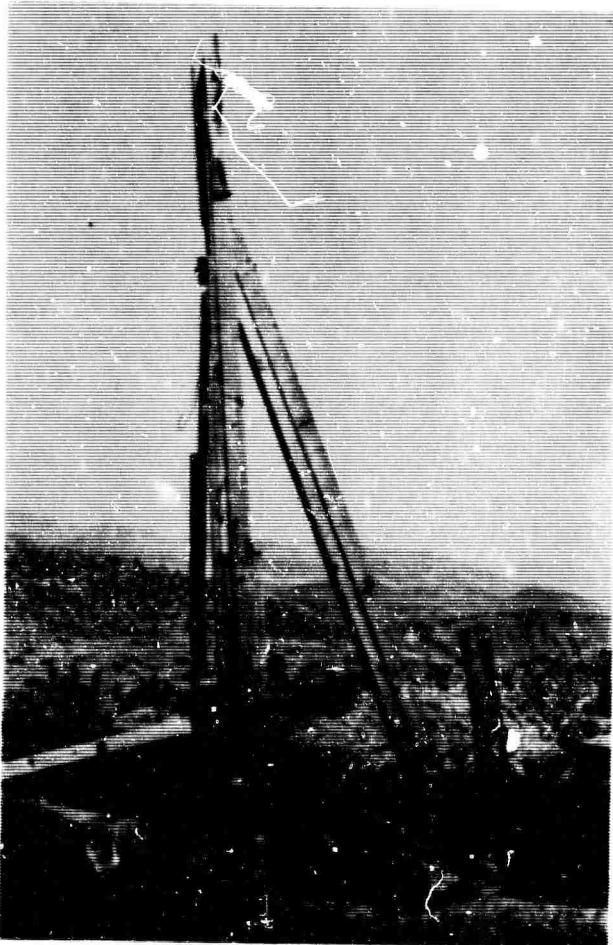


Photo No. 16-1

Preshot

October 1, 1963

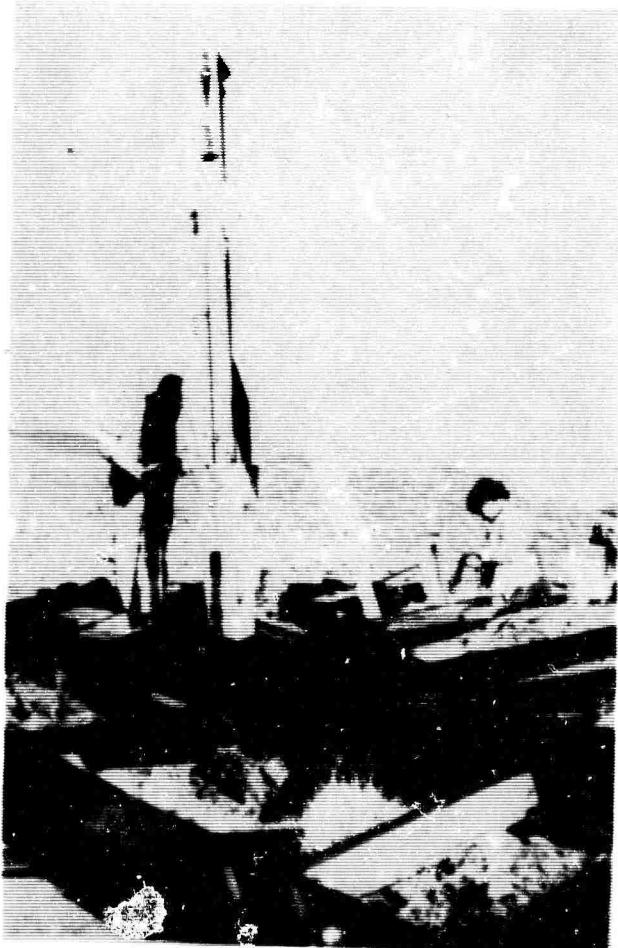


Photo No. 16-1

Postshot

October 30, 1963

RED TOP MINE

B-62



Photo No. 16-2

Preshot

October 1, 1963



Photo No. 16-2

Postshot

October 30, 1963

RED TOP MINE

B-63



Photo No. 17-1 - Preshot - October 1, 1963



Photo No. 17-1 - Postshot - October 30, 1963

RED ANT WEST MINE



Photo No. 17-2

Present

October 1, 1963



Photo No. 17-2

Postshot

October 30, 1963

RED ANT WEST MINE



Photo No. 18-1 - Preshot - October 1, 1963

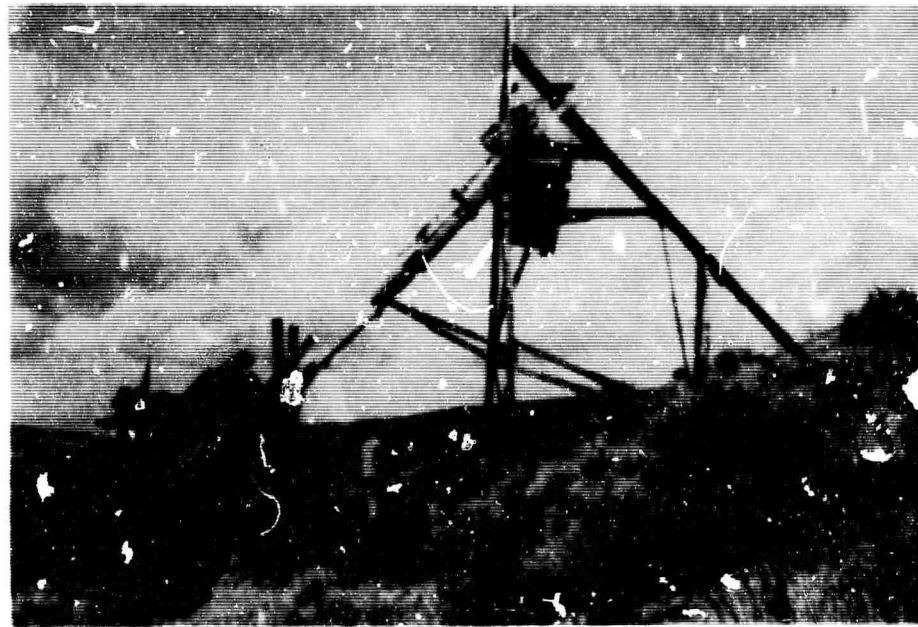


Photo No. 18-1 - Postshot - October 30, 1963

EAST END MINE

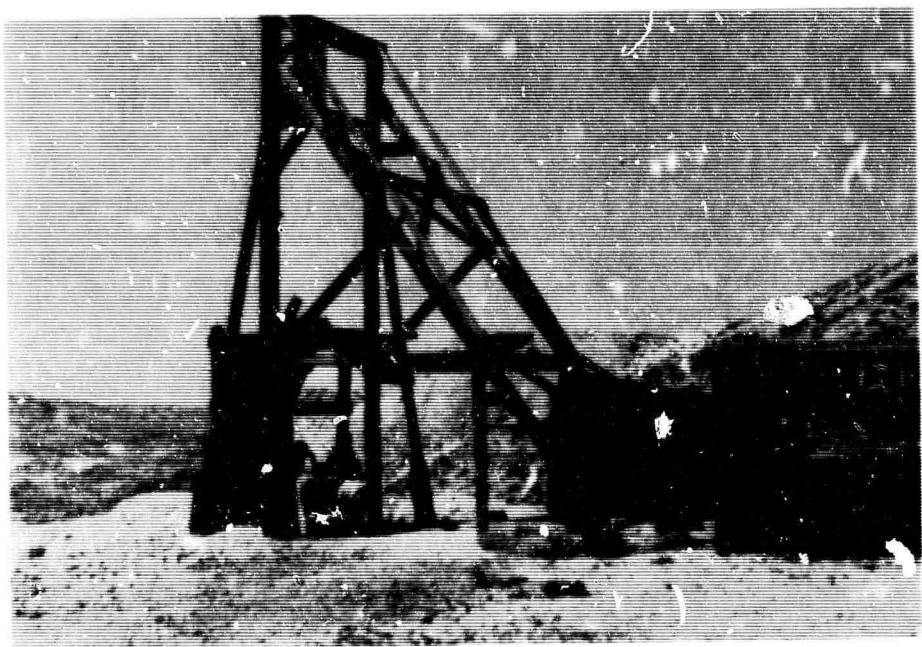


Photo No. 19-1 - Preshot - October 1, 1963

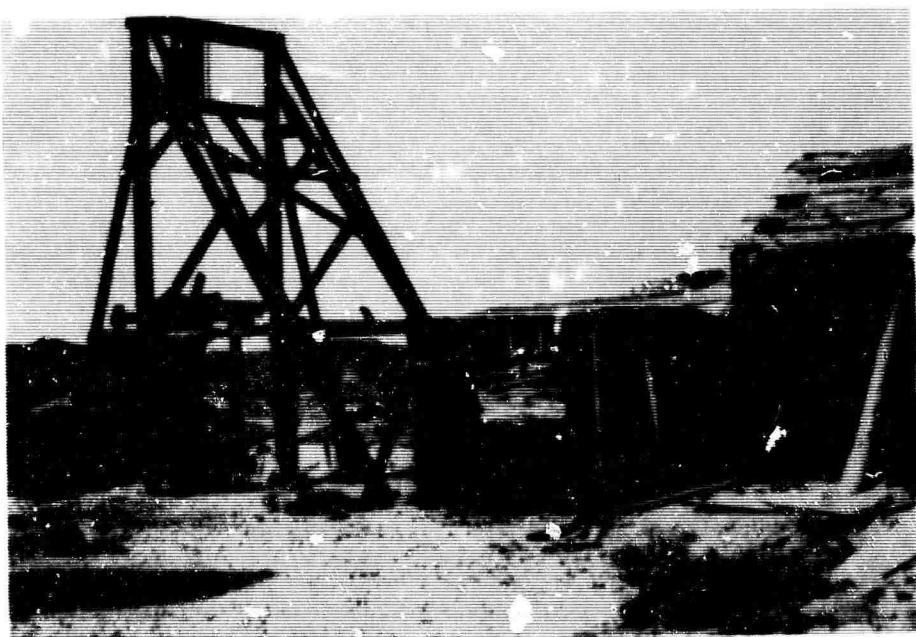


Photo No. 19-1 - Postshot - October 30, 1963

MINT MINE



Photo No. 20-1

Preshot

October 1, 1963



Photo No. 20-1

Postshot

October 30, 1963

GRUTT HILL MINE



Photo No. 20-2 - Preshot - October 1, 1963



Photo No. 20-2 - Postshot - October 30, 1963

GRUTT HILL MINE

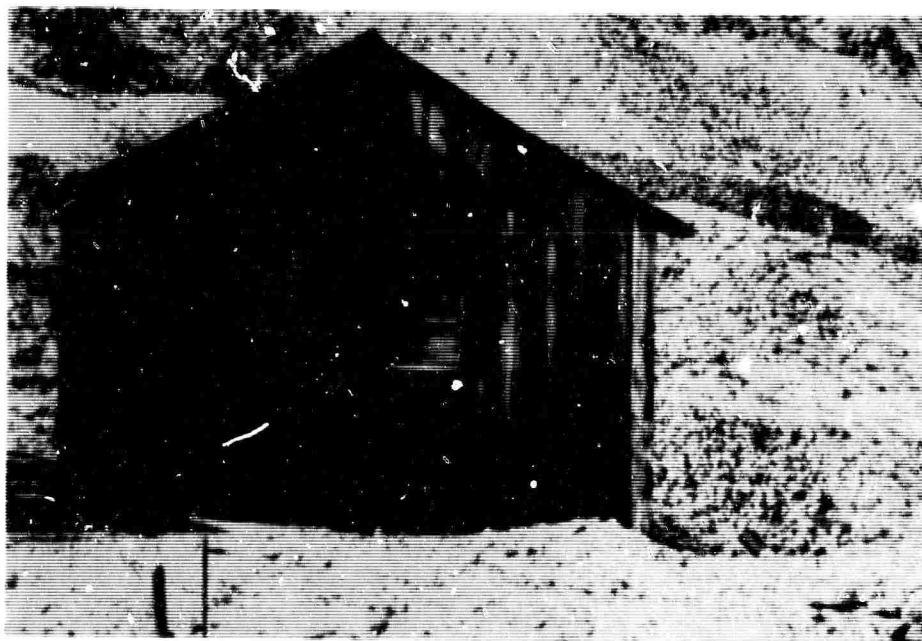


Photo No. 20-3 - Preshot - October 1, 1963

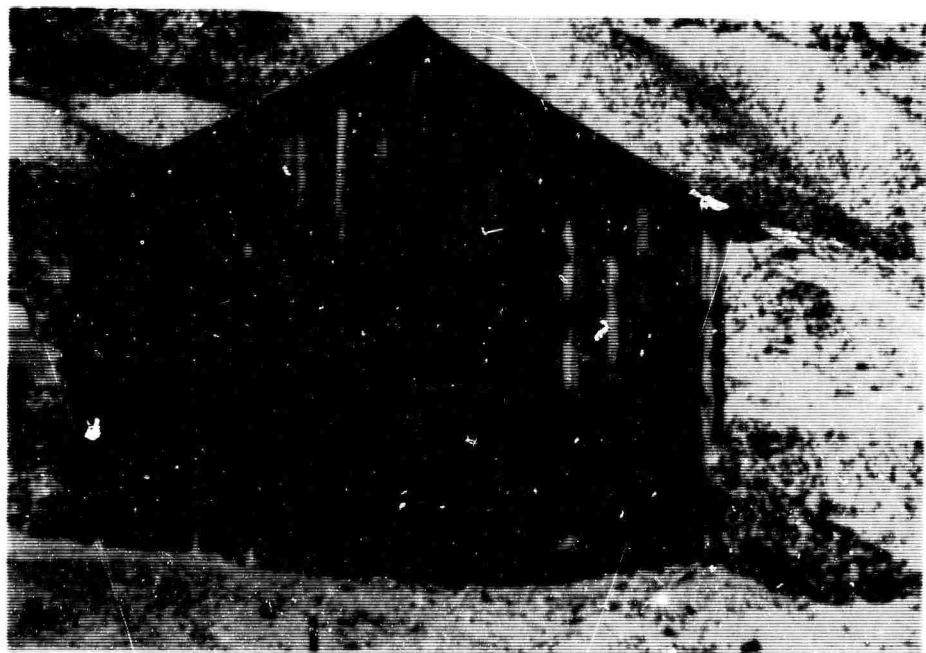


Photo No. 20-3 - Postshot - October 30, 1963

GRUTT HILL MINE



Photo No. 20-4 - Preshot - October 1, 1963

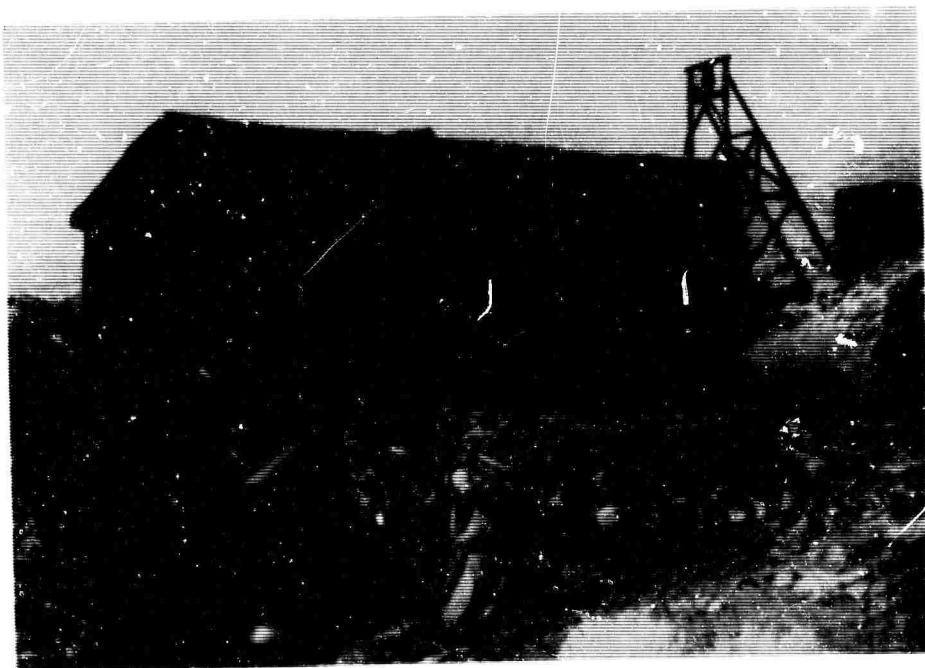


Photo No. 20-4 - Postshot - October 30, 1963

GRUTT HILL MINE



Photo No. 20-5 - Preshot - October 1, 1963

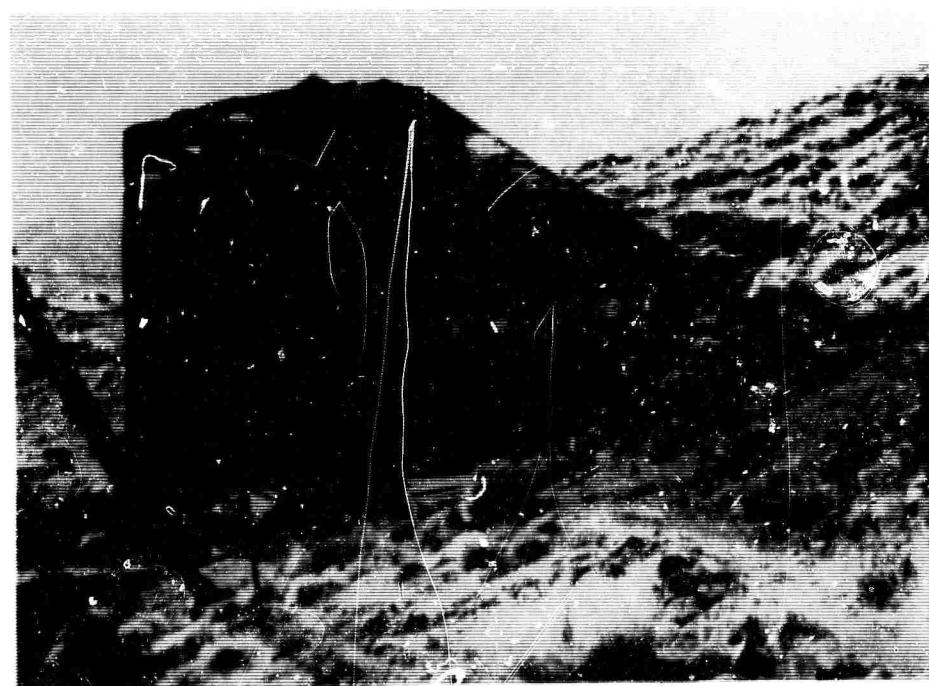


Photo No. 20-5 - Postshot - October 30, 1963

GRUTT HILL MINE



Photo No. 21-1 - Preshot - October 8, 1963



Photo No. 21-1 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

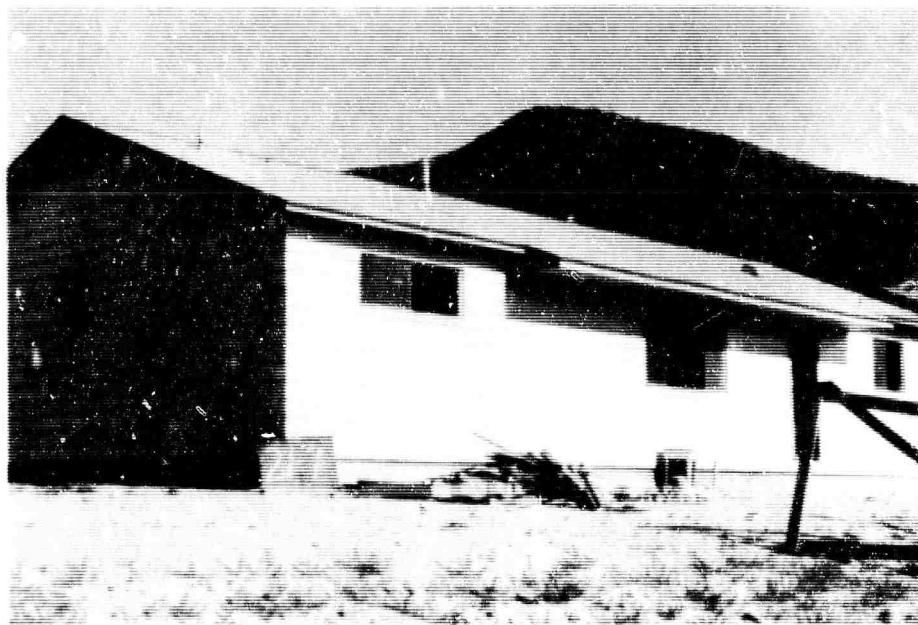


Photo No. 21-2 - Preshot - October 2, 1963



Photo No. 21-2 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-3 - Preshot - October 8, 1963



Photo No. 21-3 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

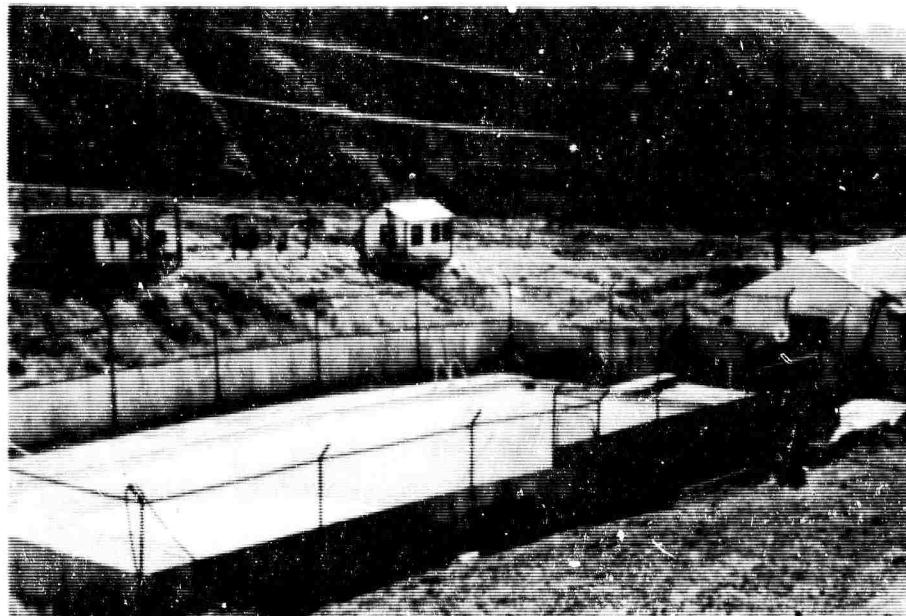


Photo No. 21-4 - Preshot - October 2, 1963



Photo No. 21-4 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

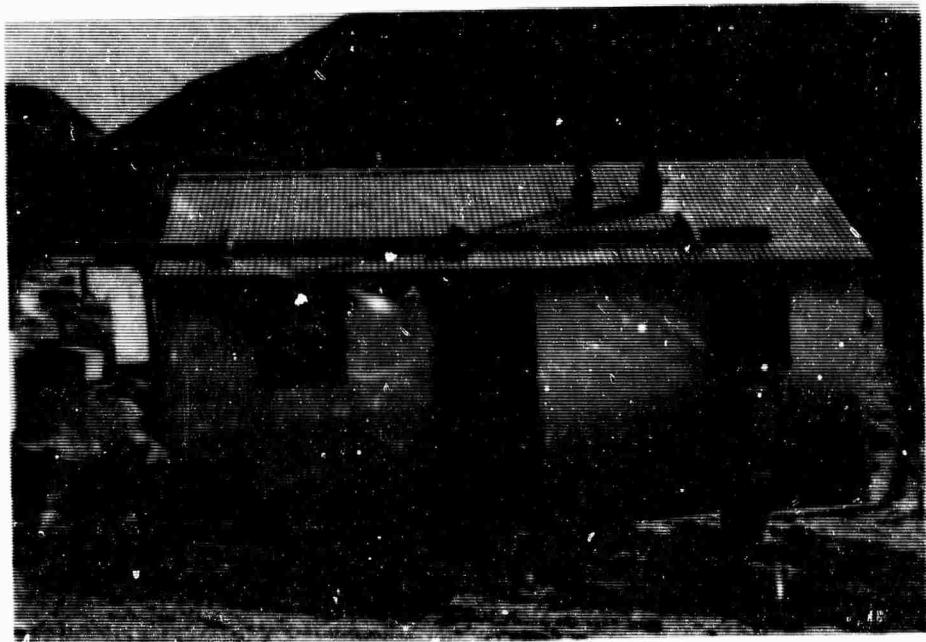


Photo No. 21-5 Preshot - October 2, 1963



Photo No. 21-5 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-6 - Preshot - October 2, 1963

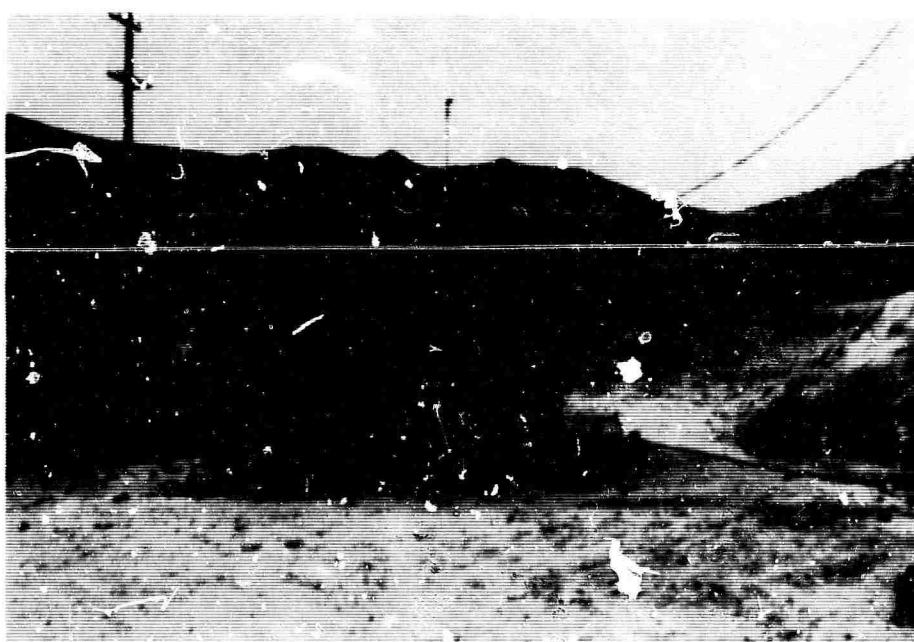


Photo No. 21-6 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-7 - Preshot - October 2, 1963

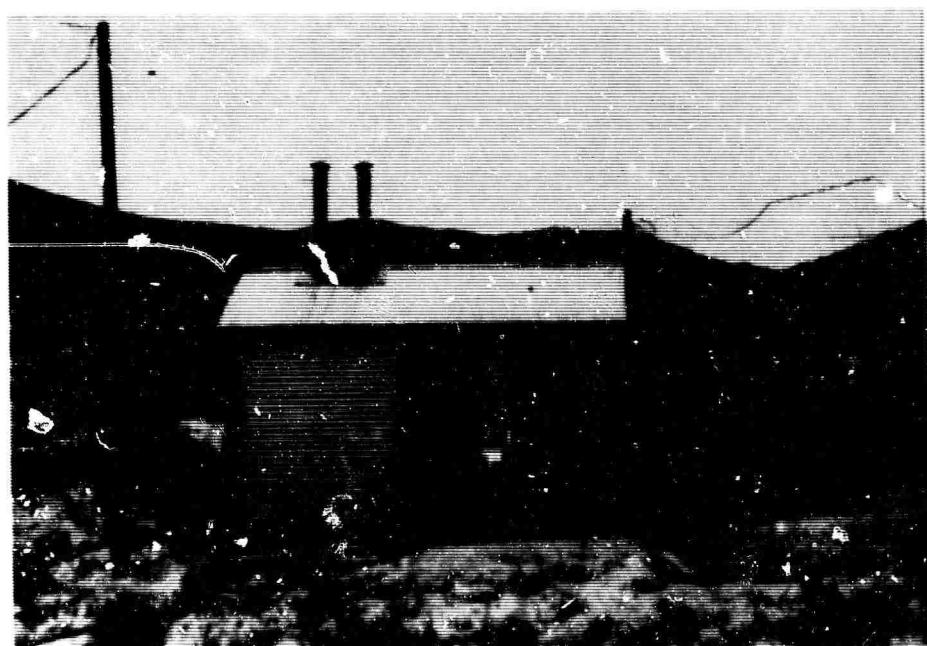


Photo No. 21-7 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-8 - Preshot - October 2, 1963

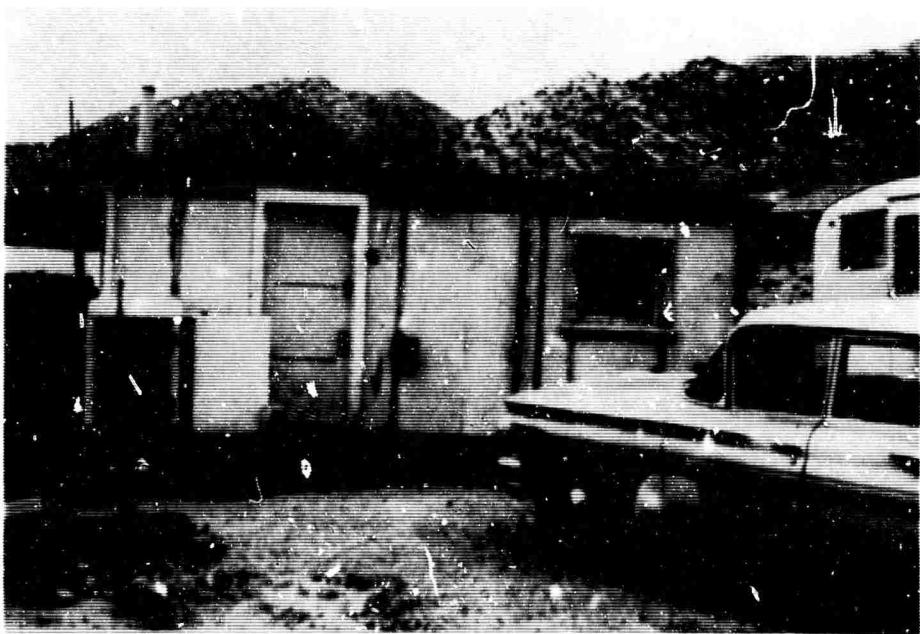


Photo No. 21-8 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-9 - Preshot - October 2, 1963



Photo No. 21-9 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-10 - Preshot - October 2, 1963

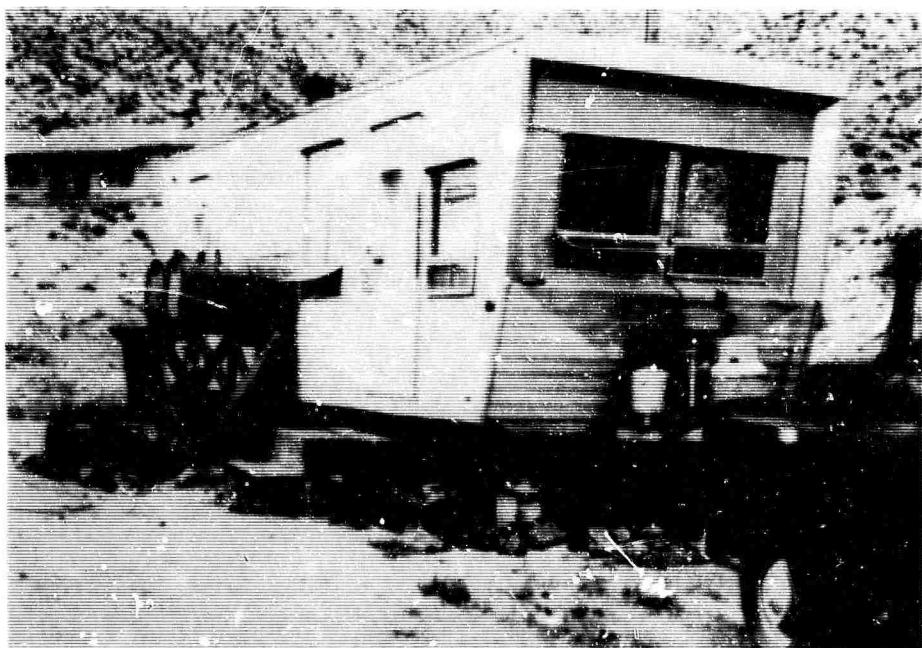


Photo No. 21-10 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-11 - Preshot - October 2, 1963



Photo No. 21-11 - Postshot - October 28, 1963

NEVADA SCHEELITE MIN^I

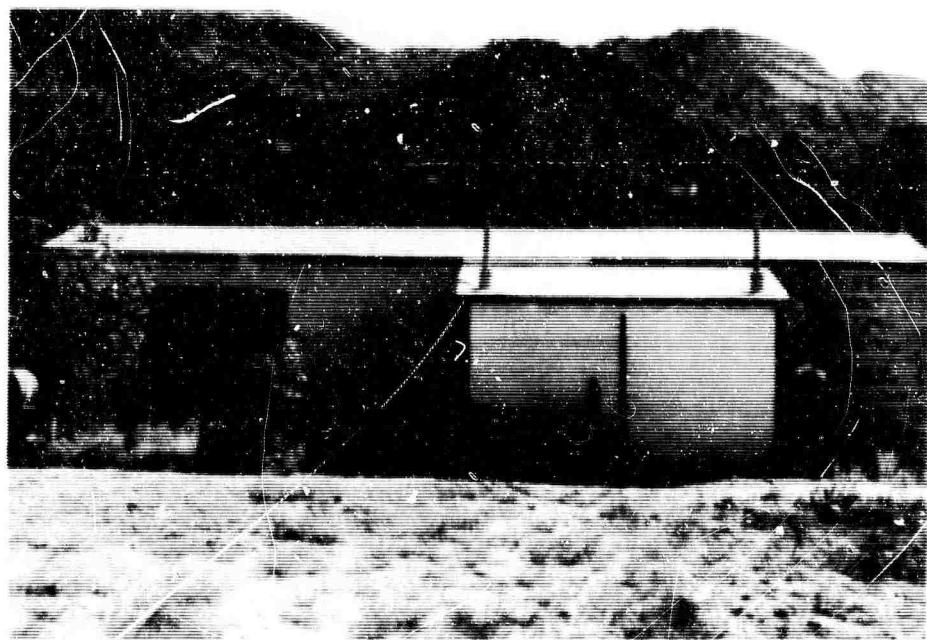


Photo No. 21-12 - Preshot - October 2, 1963



Photo No. 21-12 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-13 - Preshot - October 2, 1963

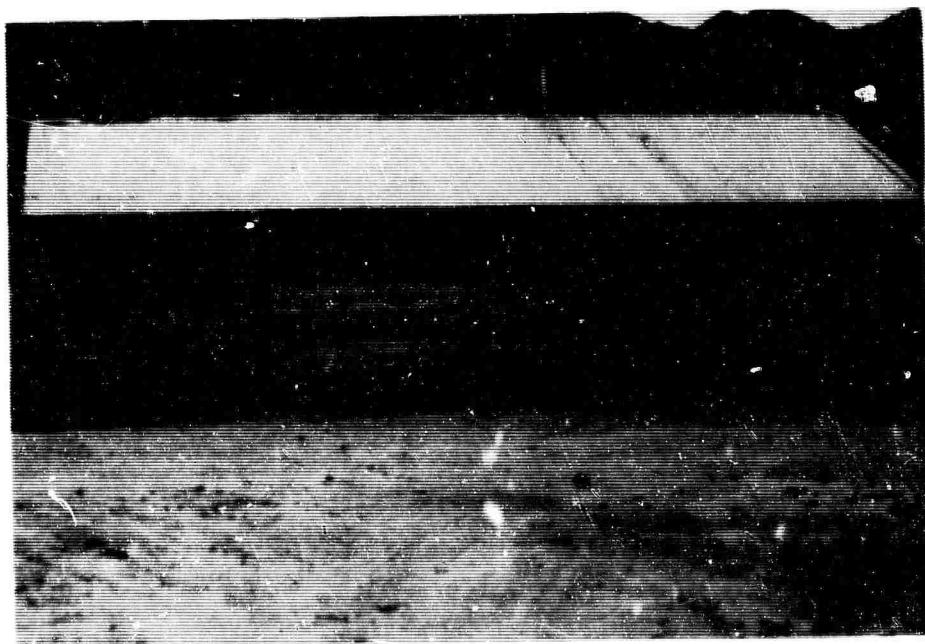


Photo No. 21-13 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-14 - Preshot - October 2, 1963



Photo No. 21-14 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

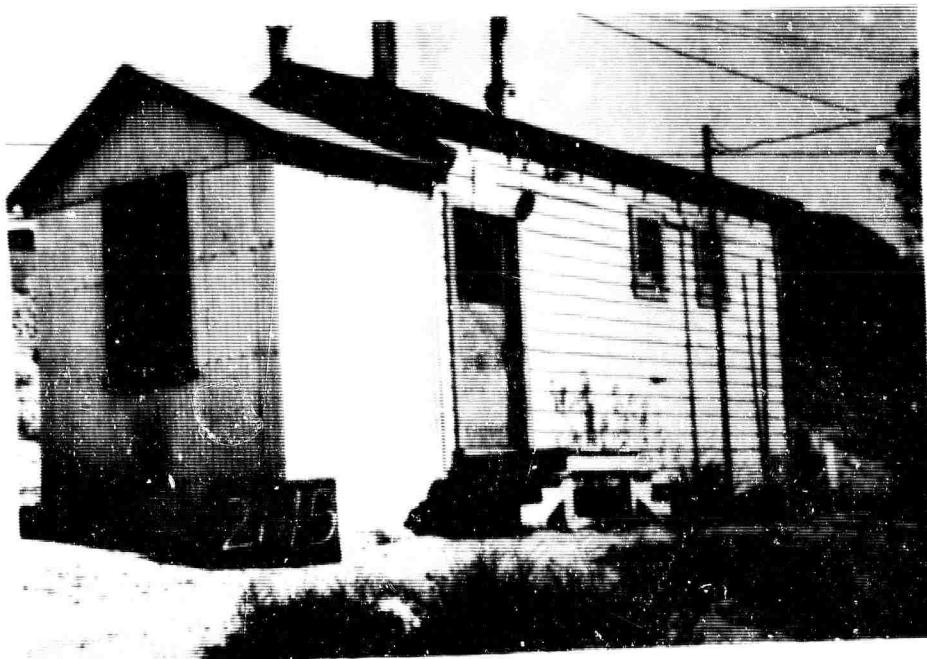


Photo No. 21-15 - Preshot - October 2, 1963



Photo No. 21-15 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

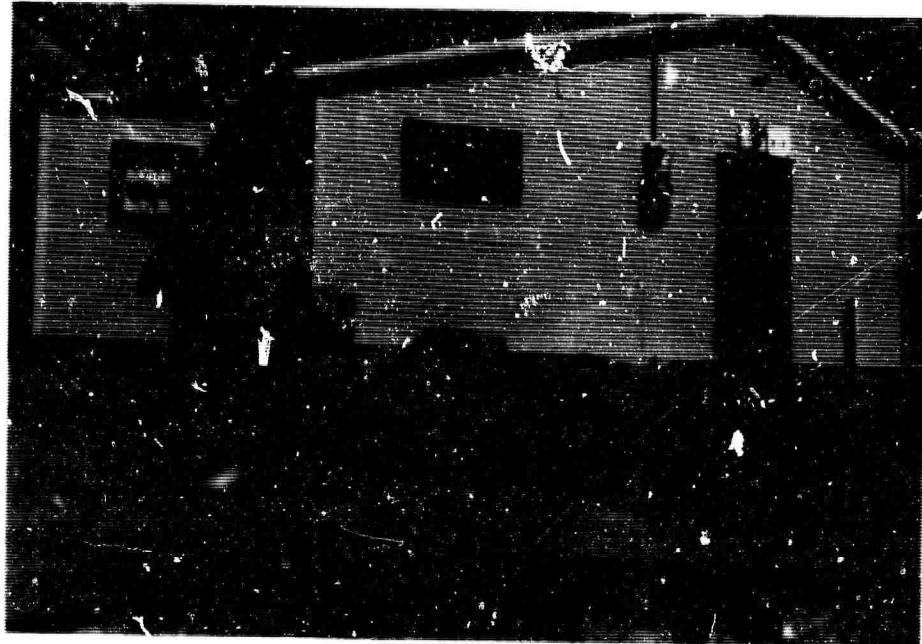


Photo No. 21-16 - Preshot - October 2, 1963

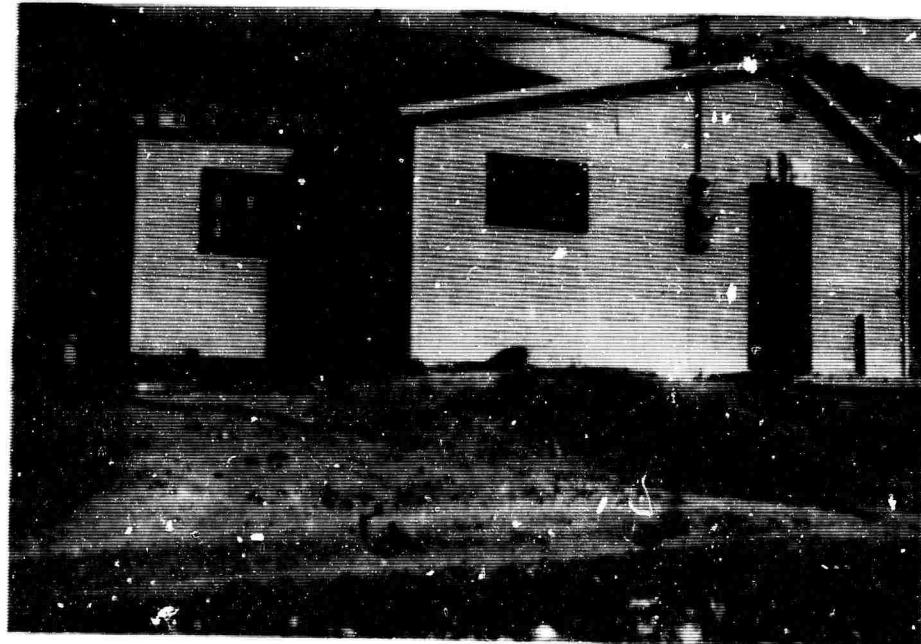


Photo No. 21-16 - Postshot - November 4, 1963

NEVADA SCHEELITE MINE

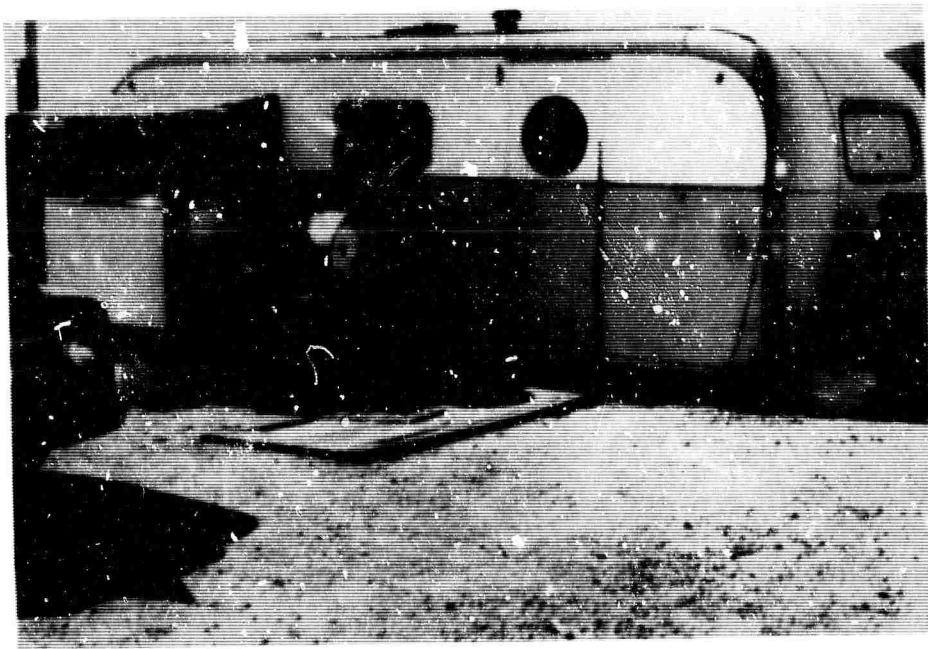


Photo No. 21-17 - Preshot - October 2, 1963

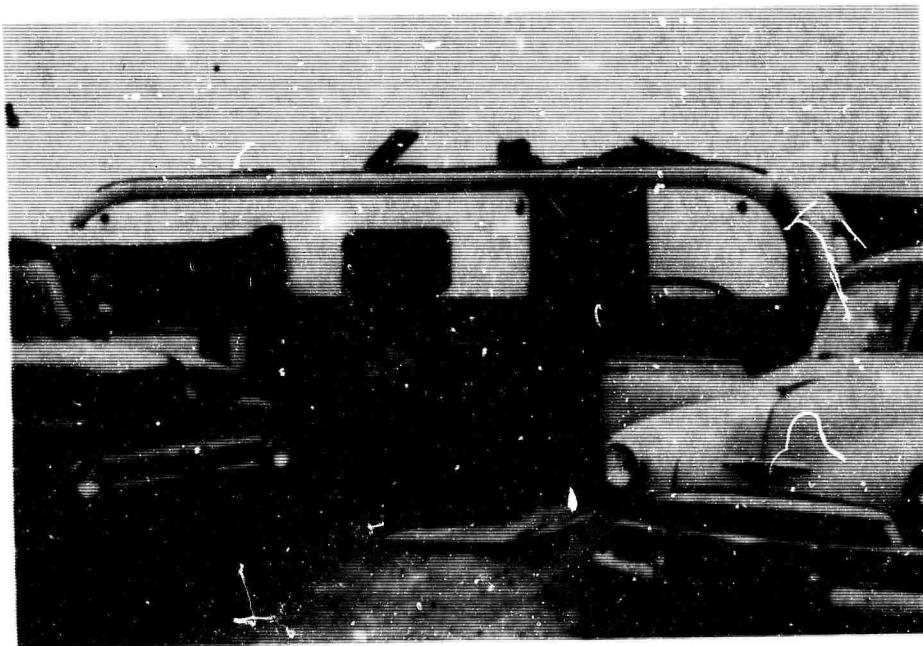


Photo No. 21-17 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

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Photo No. 21-18 - Preshot - October 2, 1963

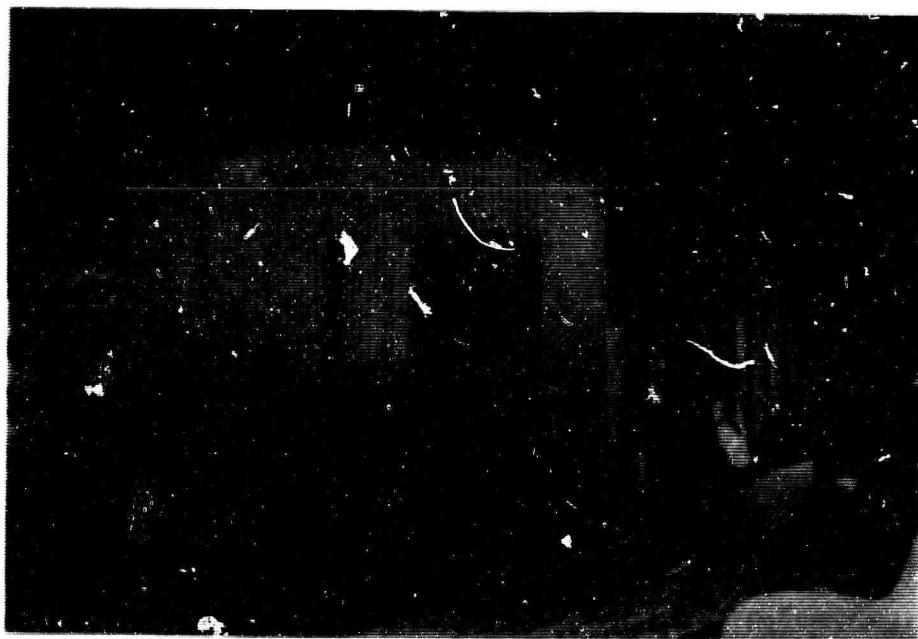


Photo No. 21-18 - Postshot - November 4, 1963

NEVADA SCHEELITE MINE



Photo No. 21-19 - Preshot - October 2, 1963



Photo No. 21-19 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

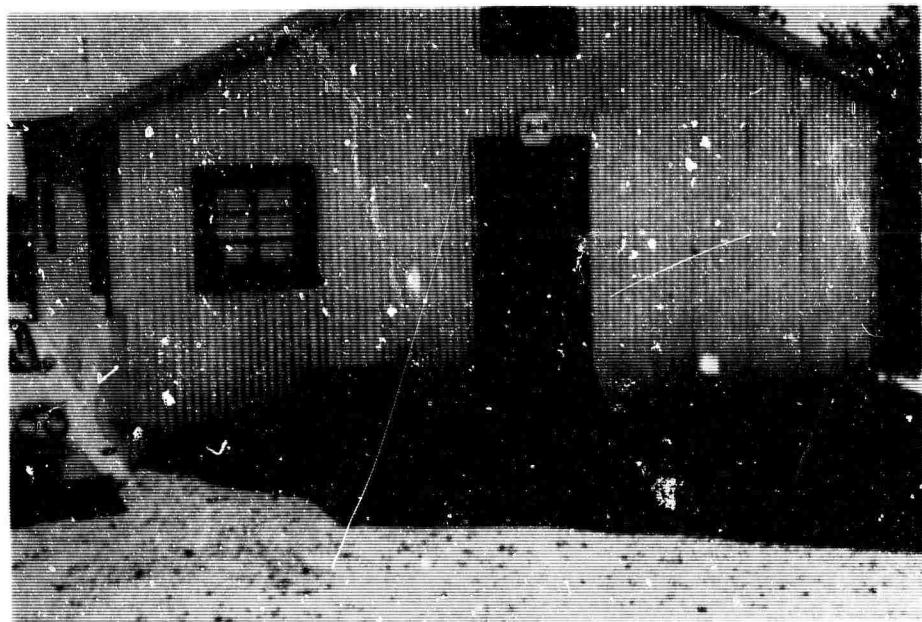


Photo No. 21-20 - Preshot - October 2, 1963

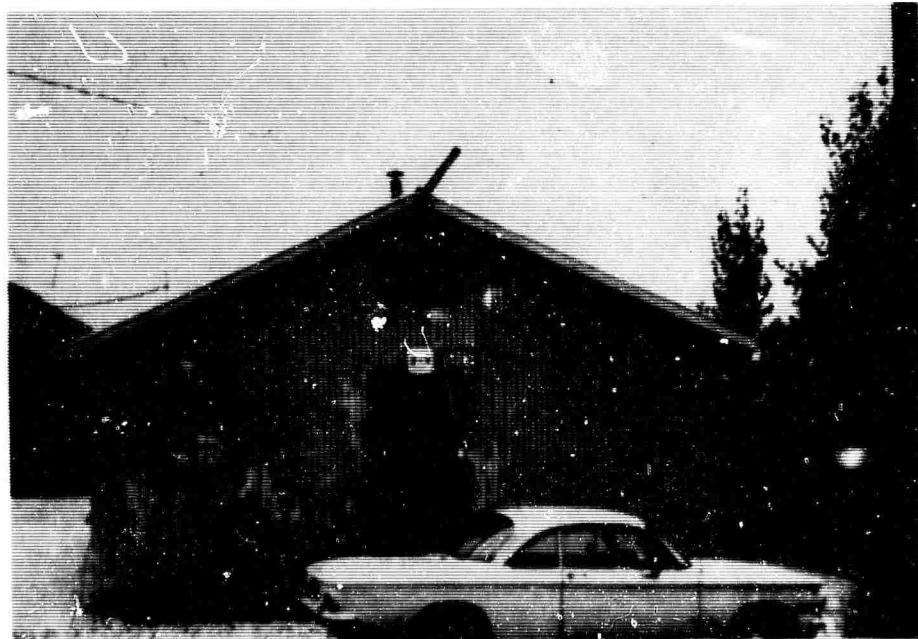


Photo No. 21-20 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

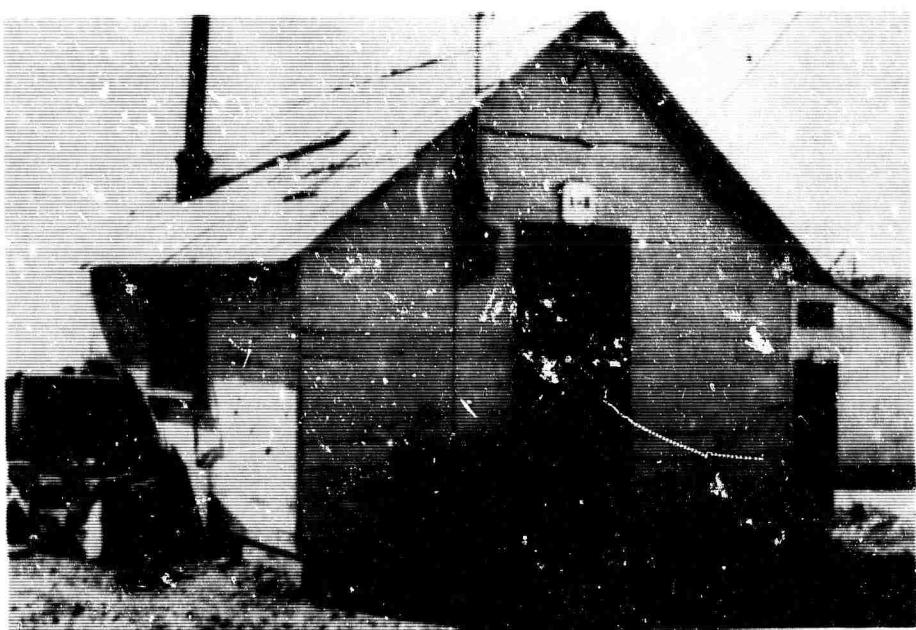


Photo No. 21-21 - Preshot - October 2, 1963

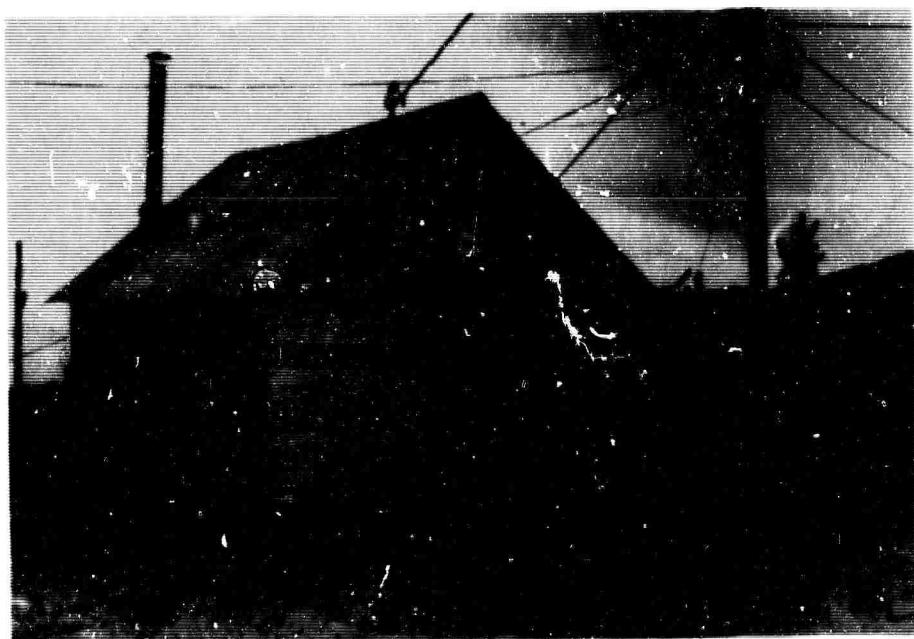


Photo No. 21-21 - Postshot - October 18, 1963

NEVADA SCHEELITE MINE



Photo No. 21-22 - Preshot - October 2, 1963

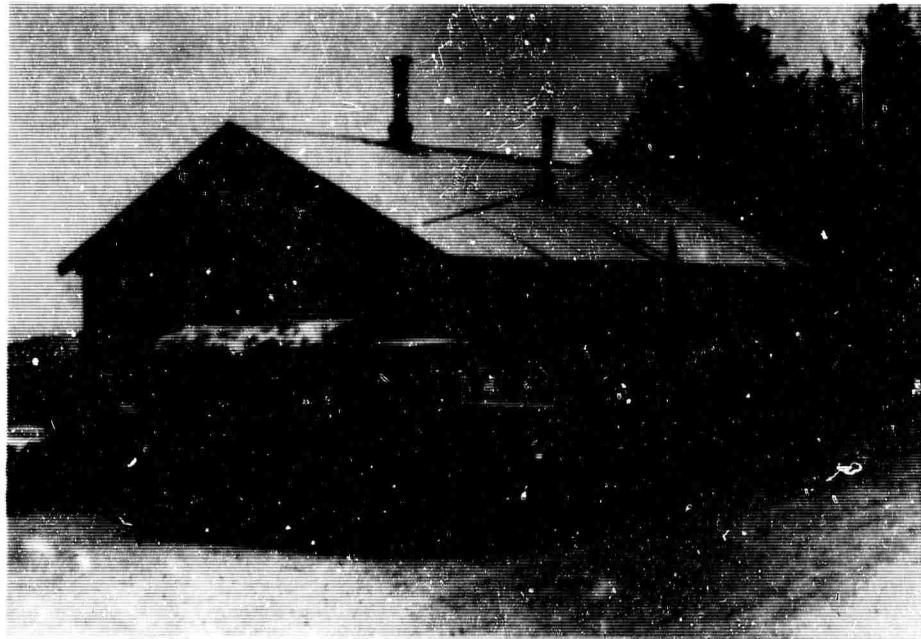


Photo No. 21-22 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

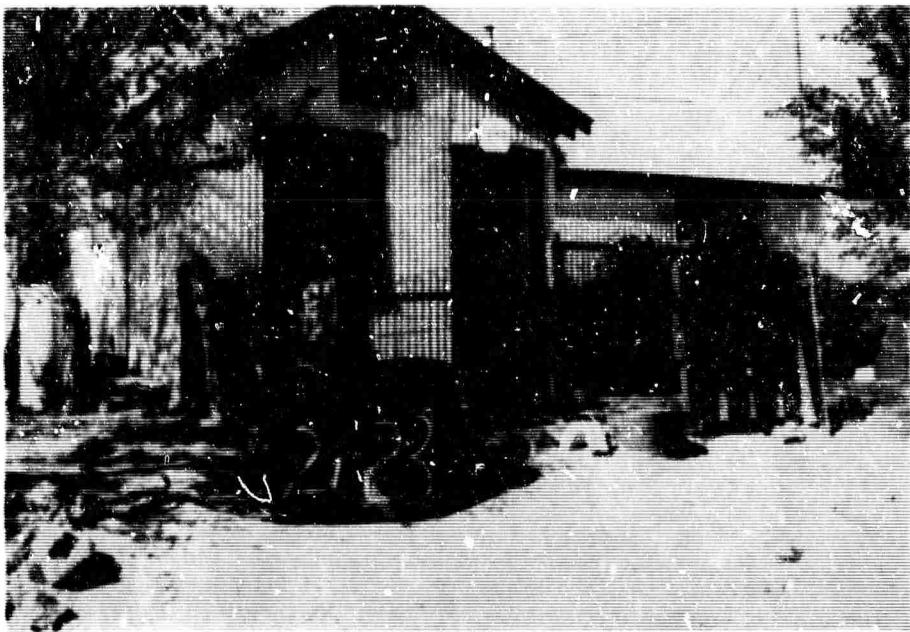


Photo No. 21-23 - Preshot - October 2, 1963

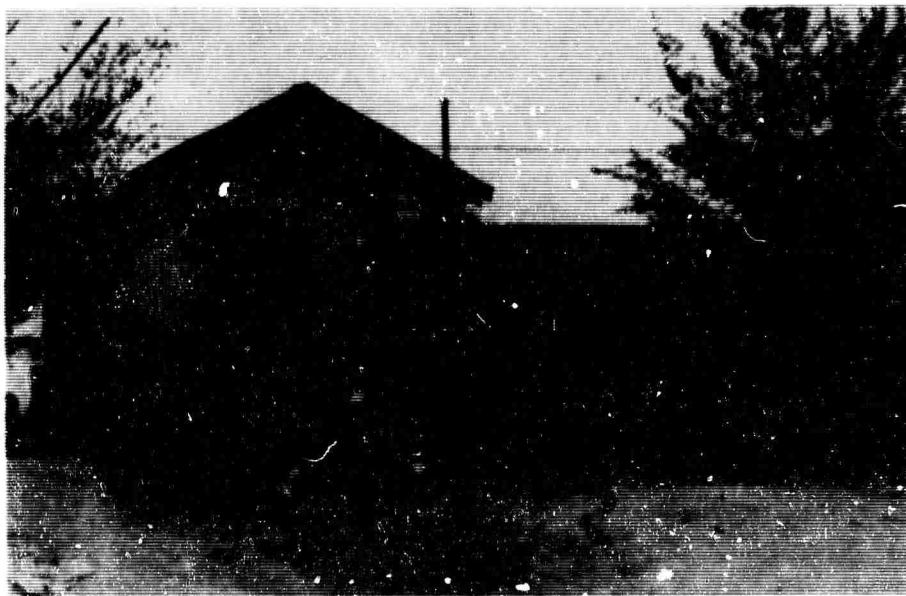


Photo No. 21-23 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

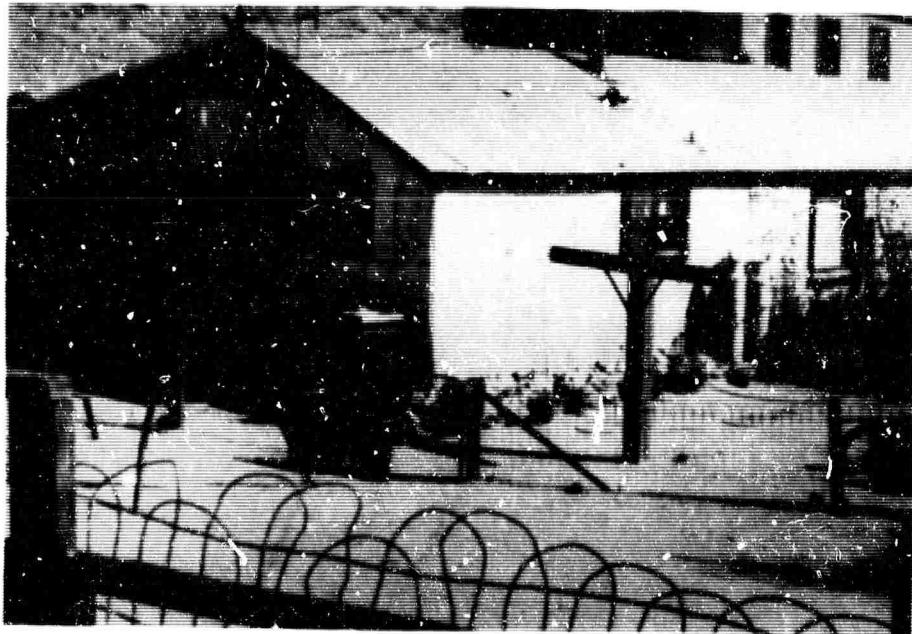


Photo No. Z1-24 - Preshot - October 2, 1963



Photo No. Z1-24 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

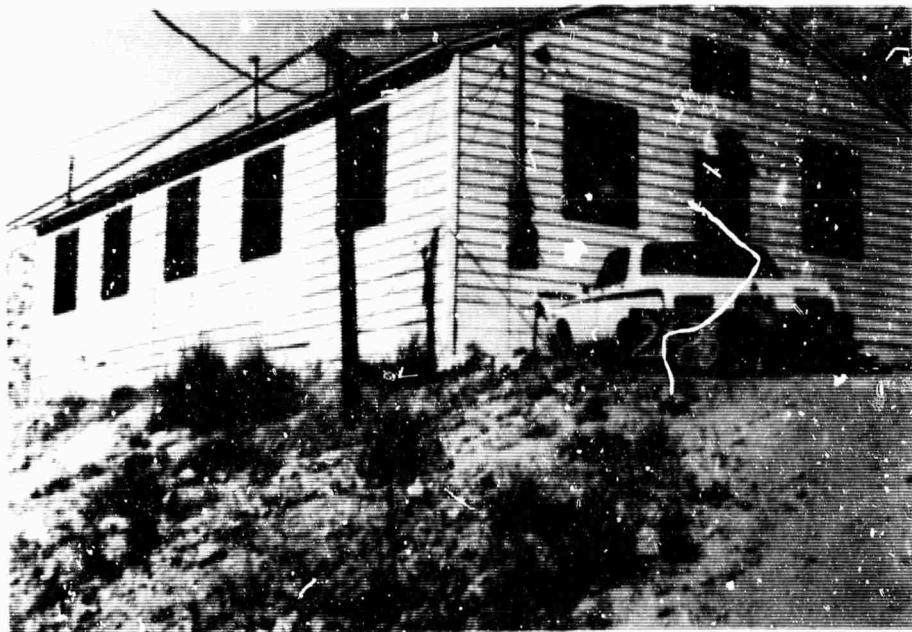


Photo No. 21-25 - Preshot - October 2, 1963



Photo No. 21-25 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-26 - Preshot - October 2, 1963



Photo No. 21-26 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

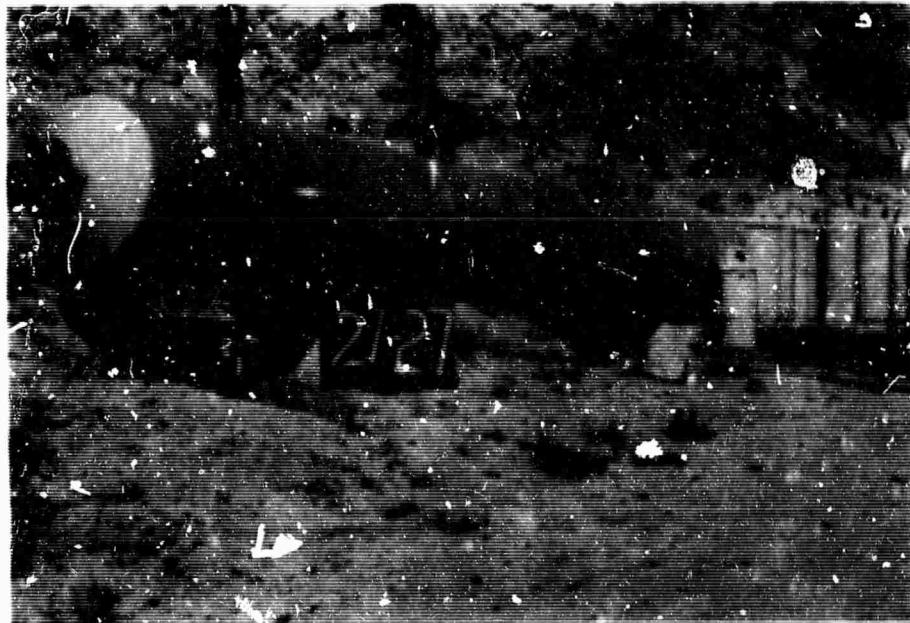


Photo No. 21-27 - Preshot - October 2, 1963



Photo No. 21-27 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

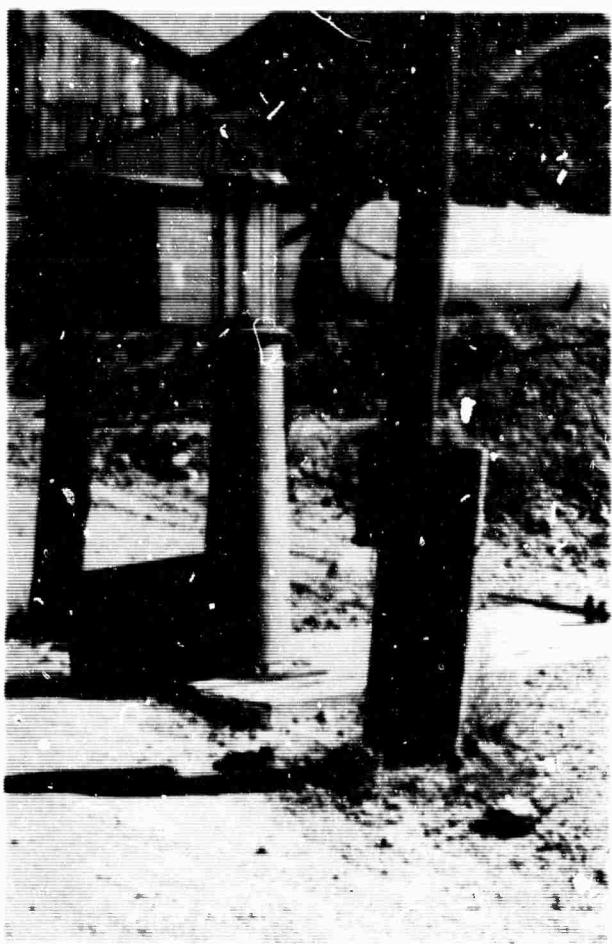


Photo No. 21-28

Preshot

October 2, 1963



Photo No. 21-28

Postshot

October 28, 1963

NEVADA SCHEELITE MINE

B-100



Photo No. 21-29 - Preshot - October 2, 1963



Photo No. 21-29 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-30 - Preshot - October 2, 1963



Photo No. 21-30 - Postshot - October 30, 1963

NEVADA SCHEELITE MINE

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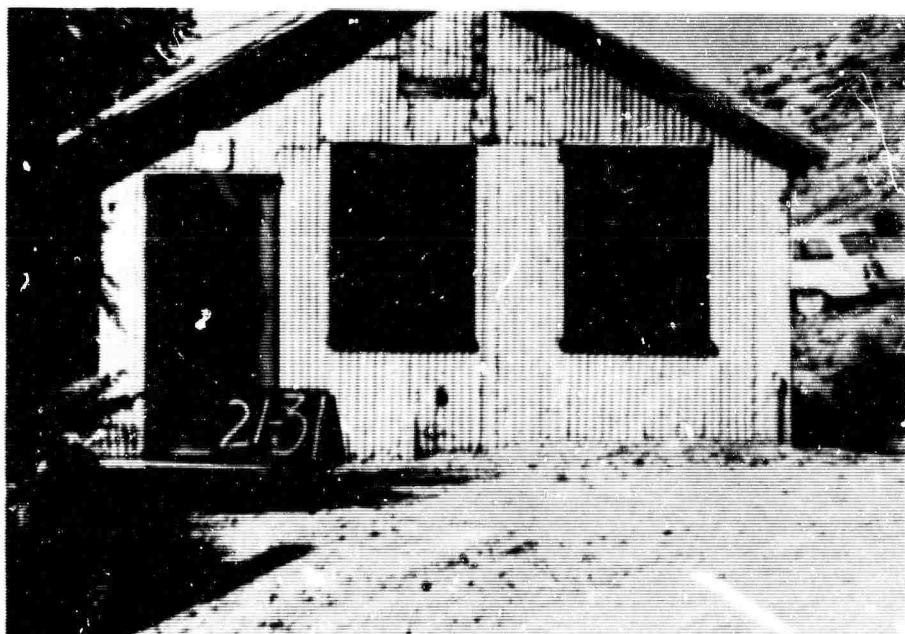


Photo No. 21-31 - Preshot - October 2, 1963

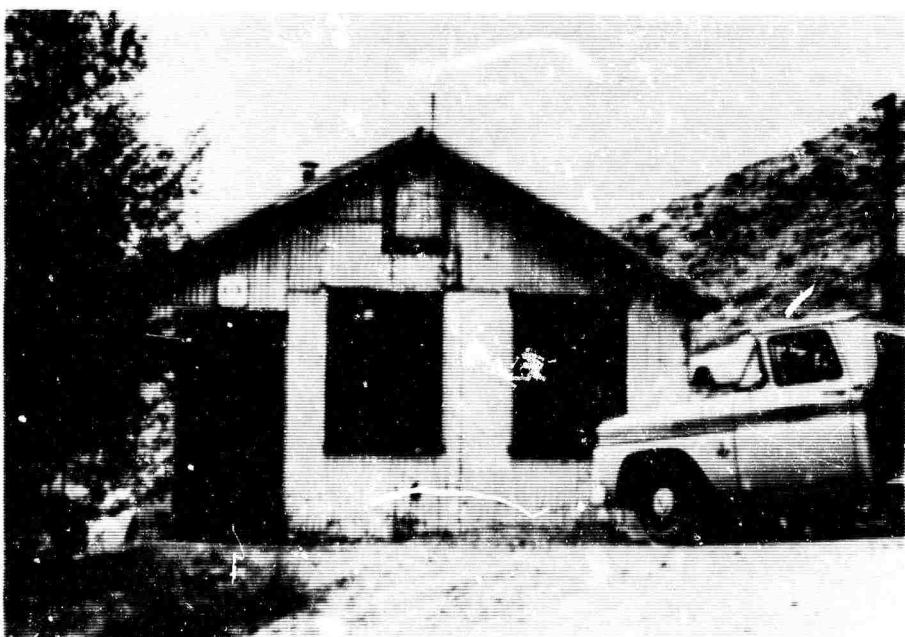


Photo No. 21-31 - Postshot - October 23, 1963

NEVADA SCHEELITE MINE

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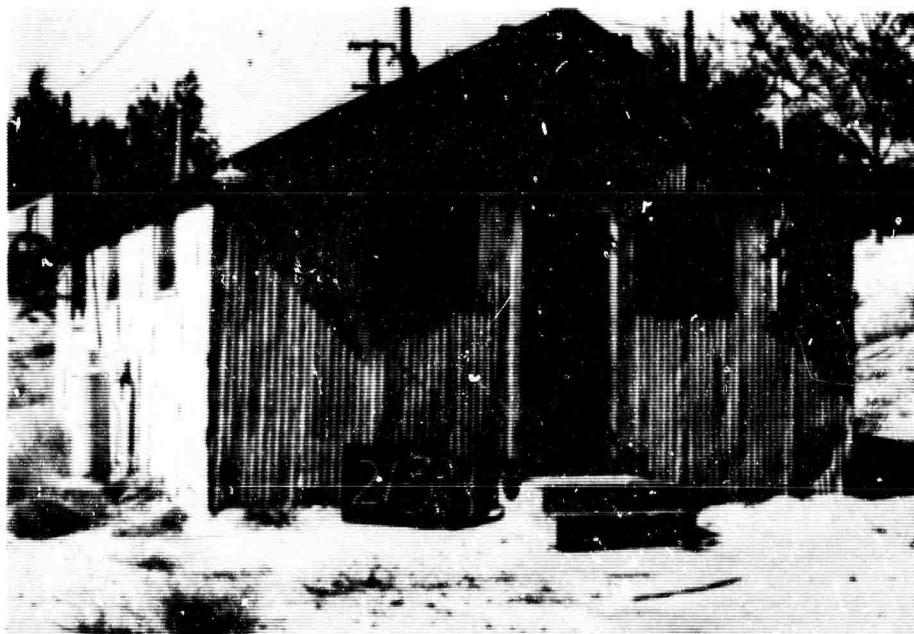


Photo No. 21-32 - Preshot - October 2, 1963

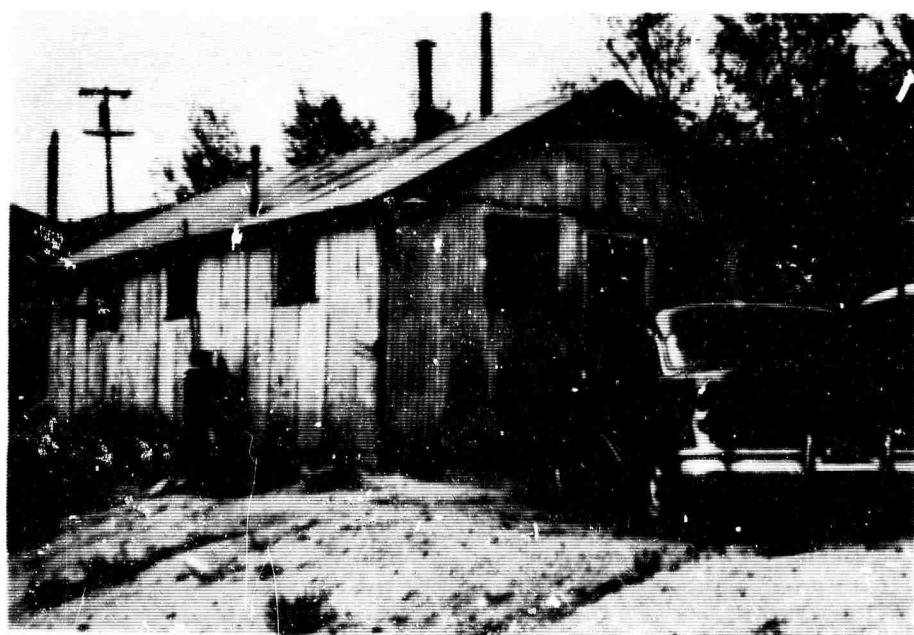


Photo No. 21-32 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-33 - Preshot - October 2, 1963

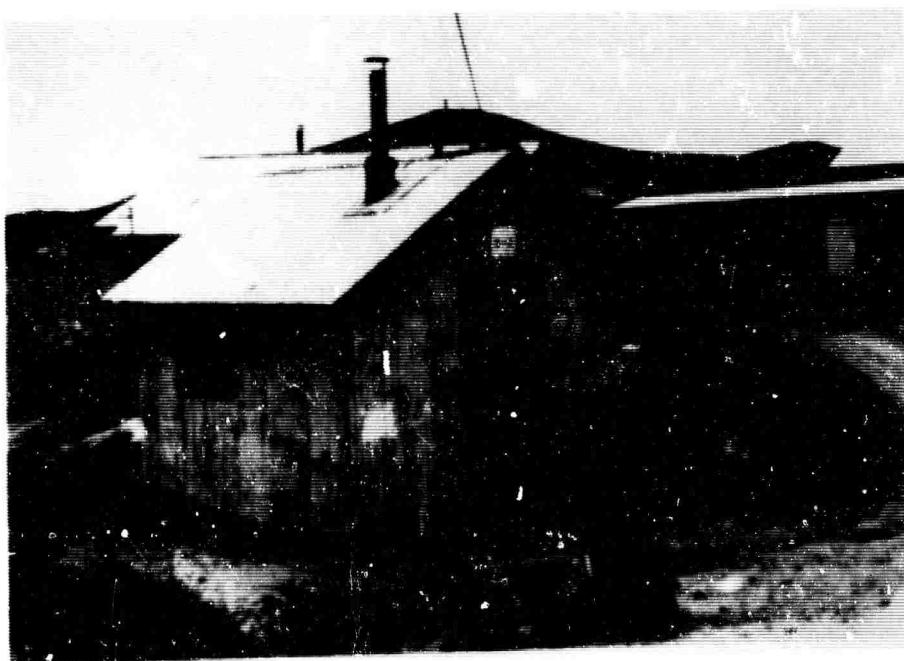


Photo No. 21-33 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-34 - Preshot - October 2, 1963



Photo No. 21-34 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-35

Preshot

October 2, 1963

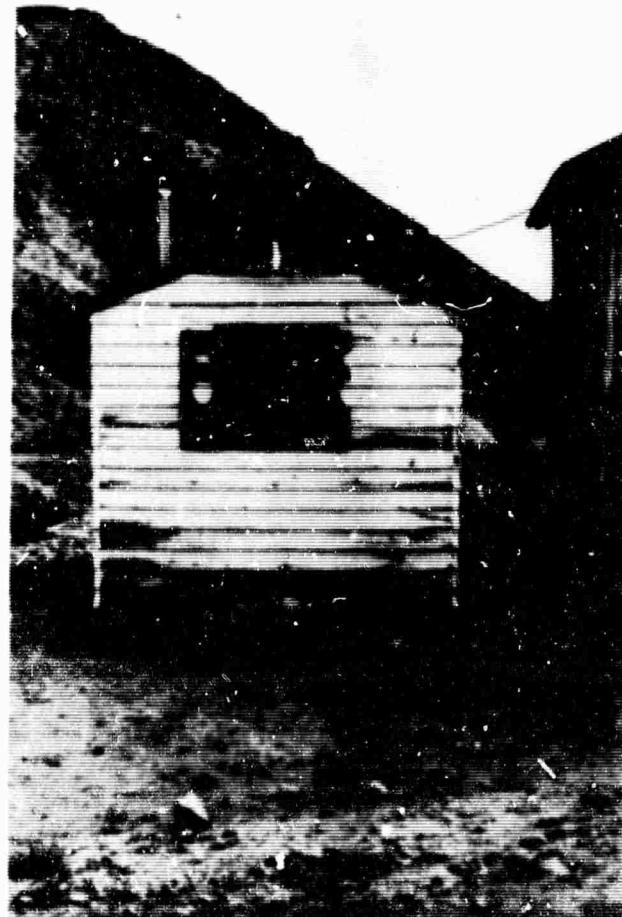


Photo No. 21-35

Postshot

October 28, 1963

NEVADA SCHEELITE MINE

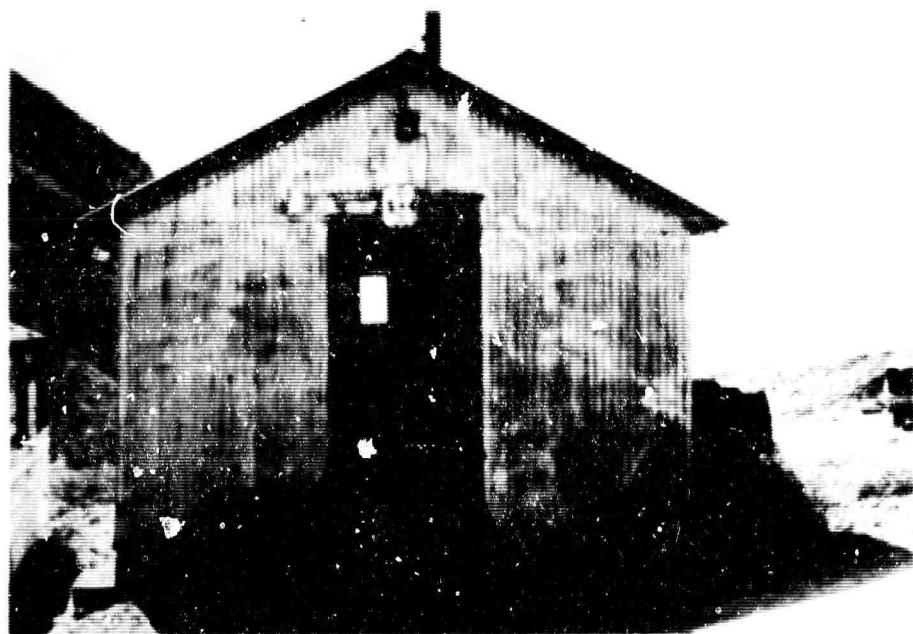


Photo No. 21-36 - Preshot - October 2, 1963



Photo No. 21-36 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-37 - Preshot - October 2, 1963

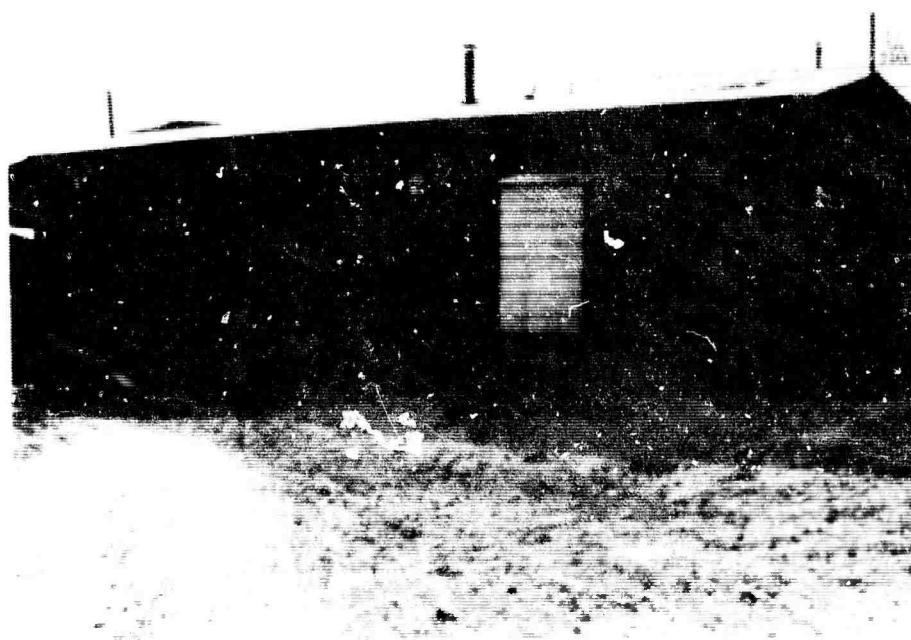


Photo No. 21-37 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-38 - Preshot - October 2, 1963



Photo No. 21-38 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

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Photo No. 21-39 - Preshot - October 2, 1963



Photo No. 21-39 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-40 - Preshot - October 2, 1963

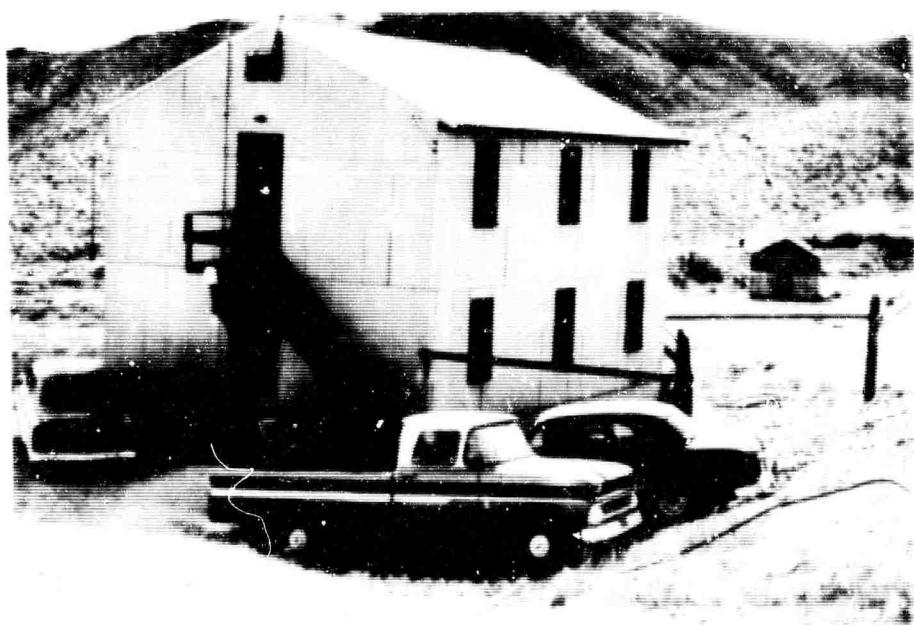


Photo No. 21-40 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

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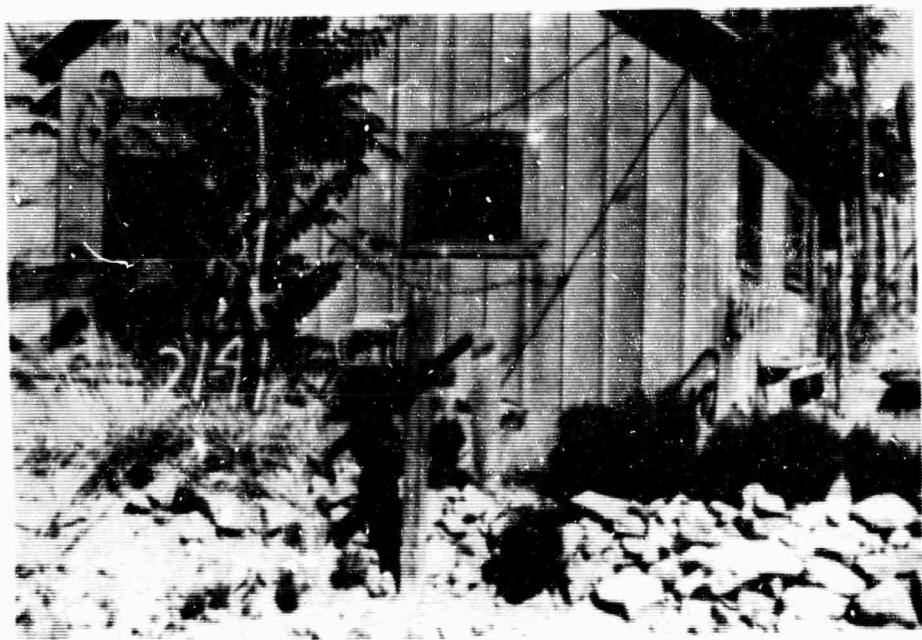


Photo No. 21-41 - Preshot - October 2, 1963

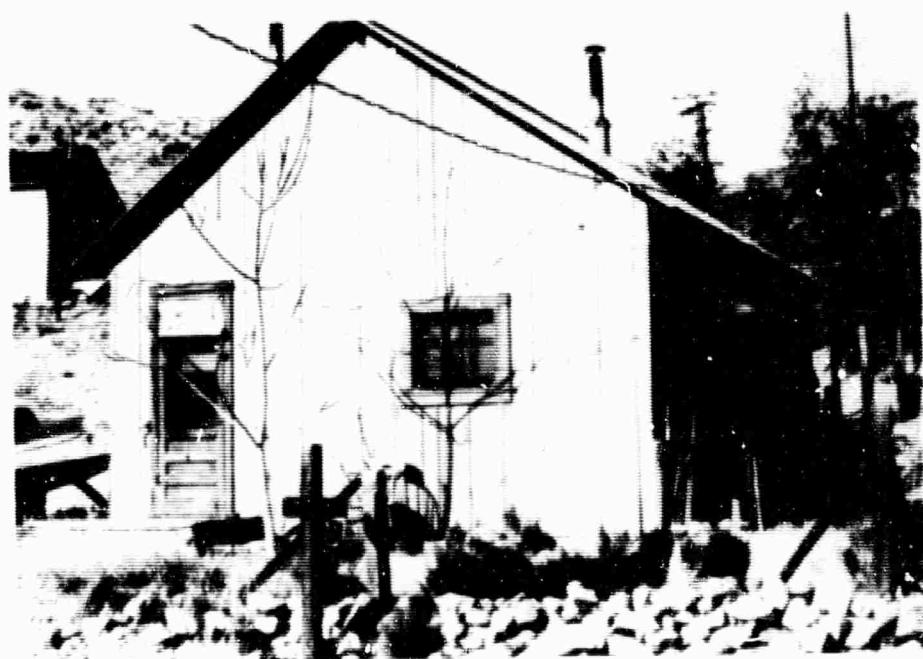


Photo No. 21-41 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-42 - Preshot - October 2, 1963

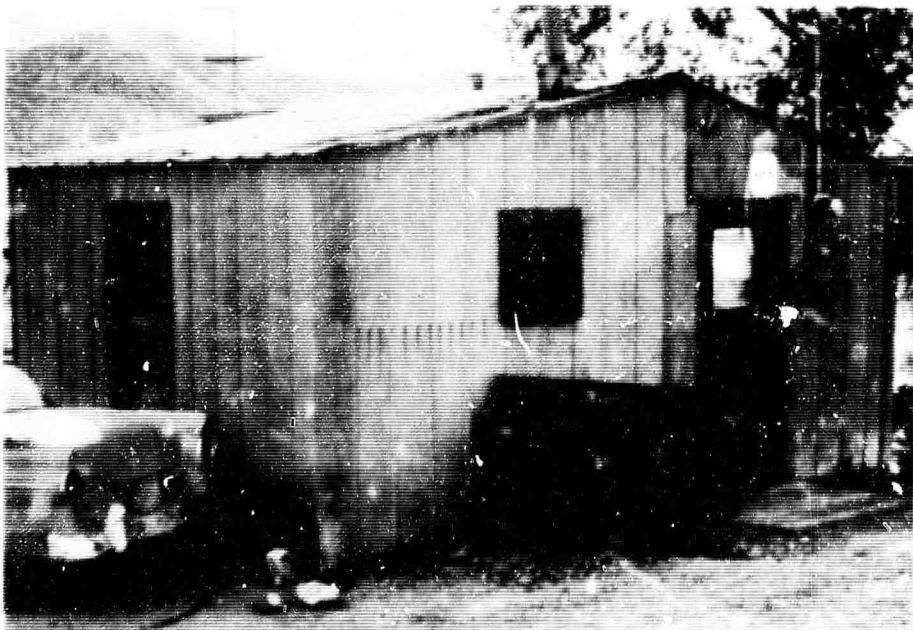


Photo No. 21-42 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-43 - Preshot - October 2, 1963



Photo No. 21-43 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

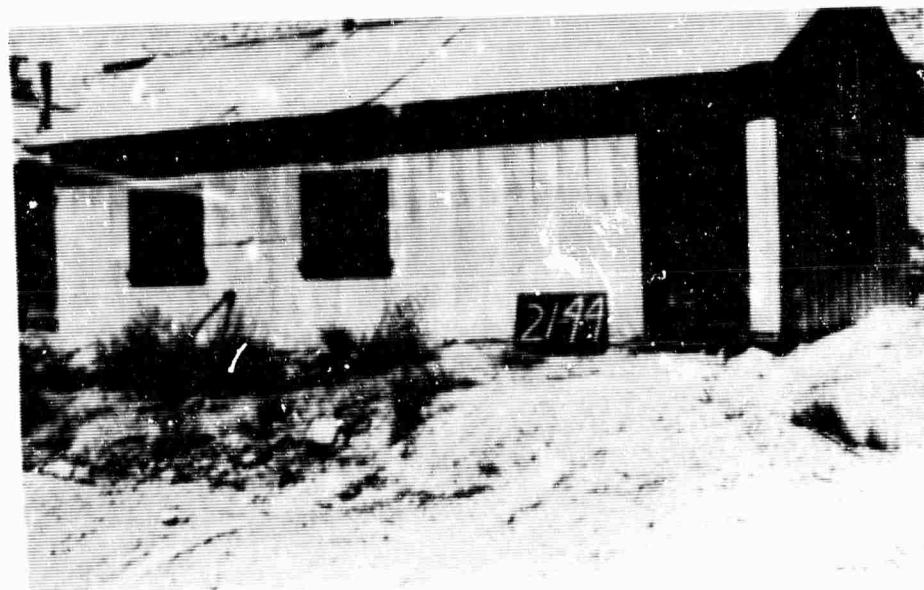


Photo No. 21-44 - Preshot - October 2, 1963



Photo No. 21-44 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

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Photo No. 21-45 - Preshot - October 2, 1963

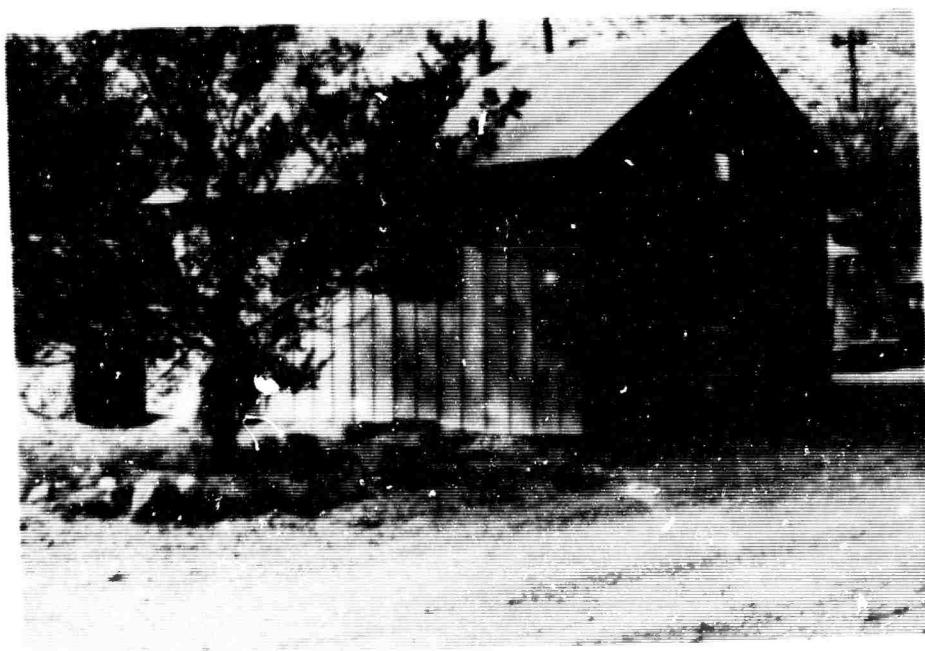


Photo No. 21-45 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-46 - Preshot - October 2, 1963



Photo No. 21-46 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

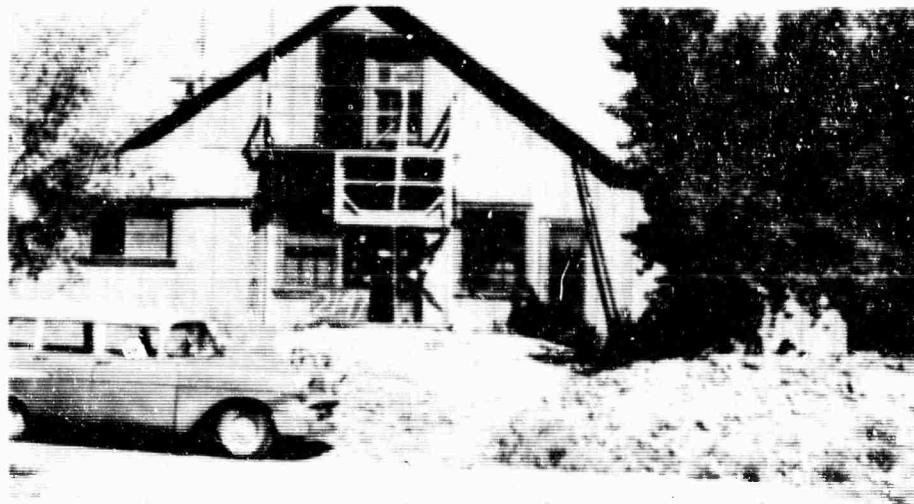


Photo No. 21-47 - Preshot - October 2, 1963

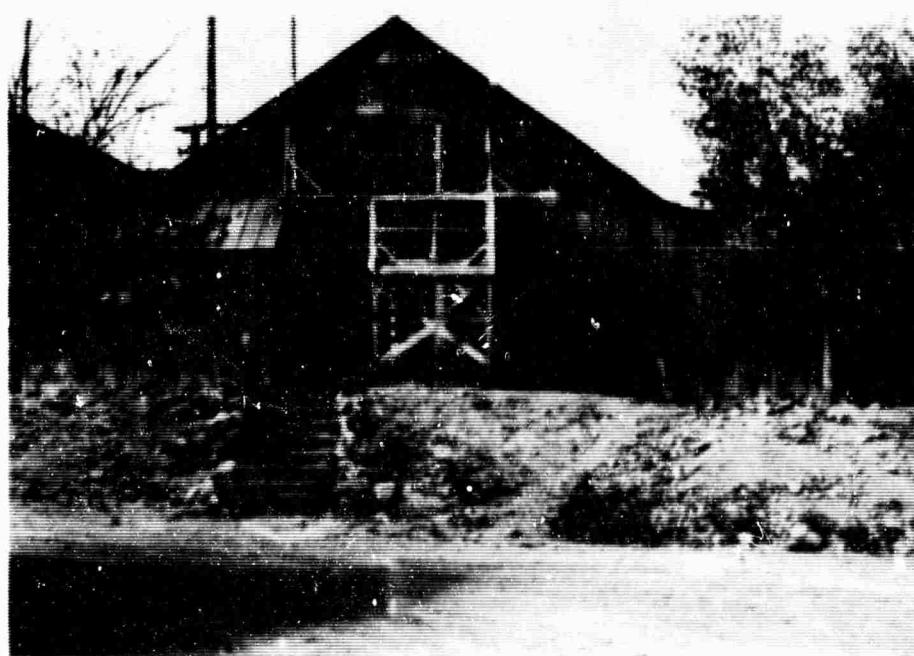


Photo No. 21-47 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

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Photo No. 21-48 - Preshot - October 2, 1963

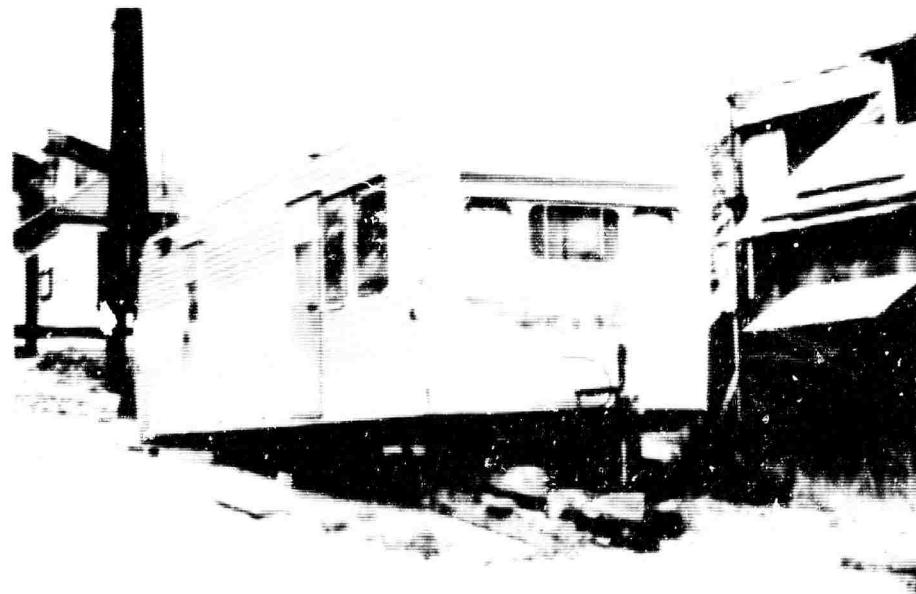


Photo No. 21-48 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

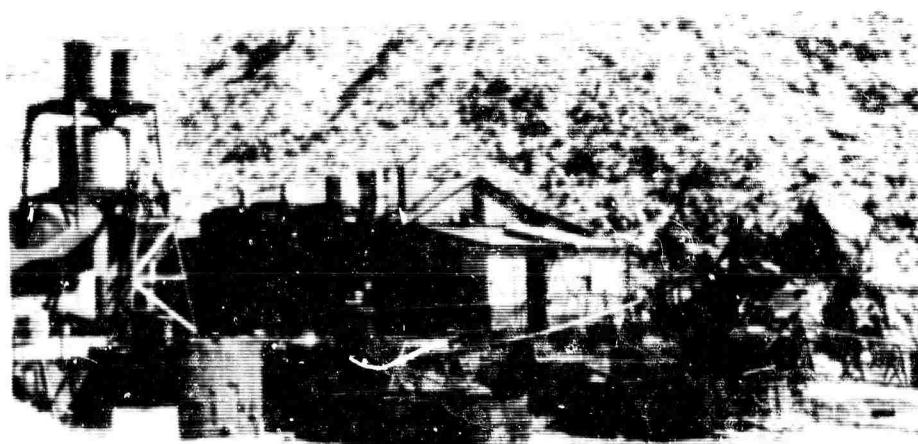


Photo No. 21-49 - Preshot - October 2, 1963

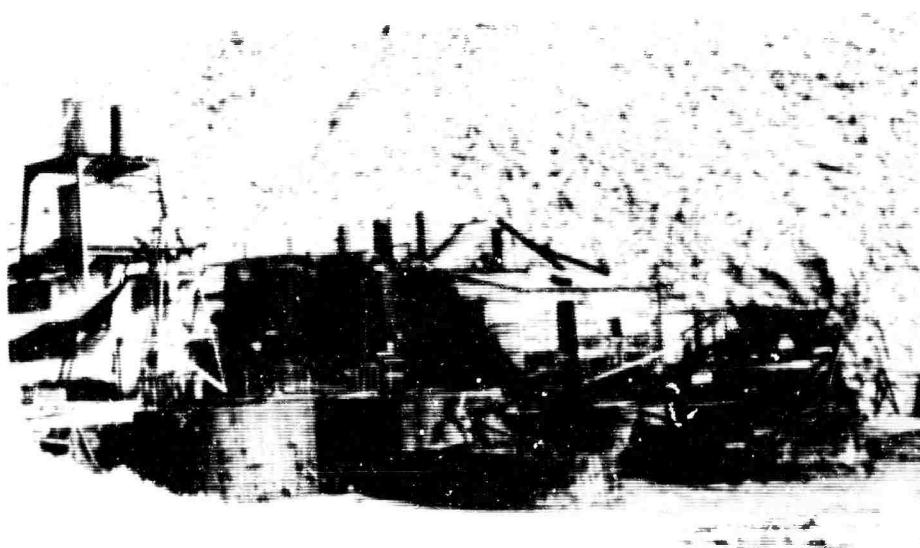


Photo No. 21-49 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

B-121

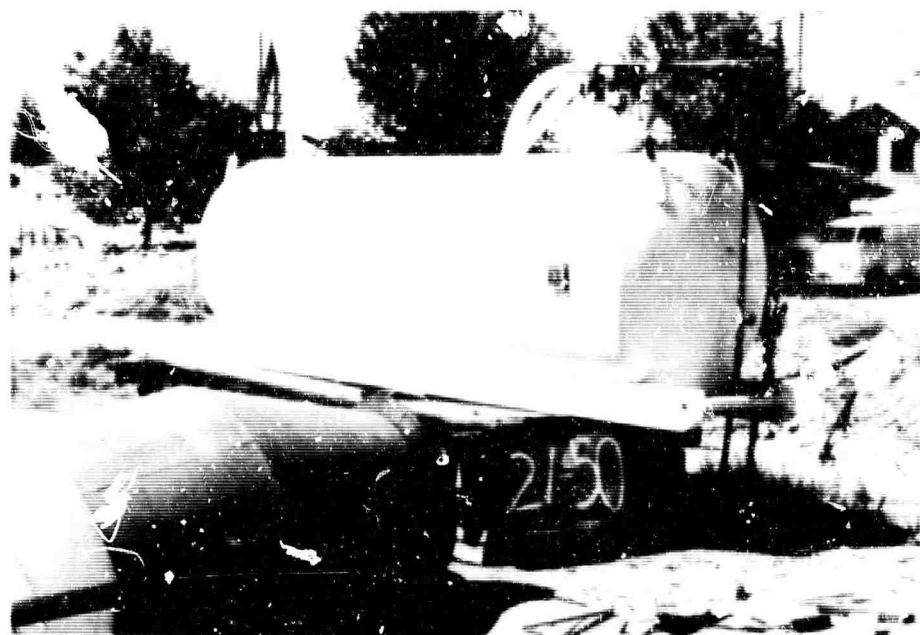


Photo No. 21-50 - Preshot - October 2, 1963

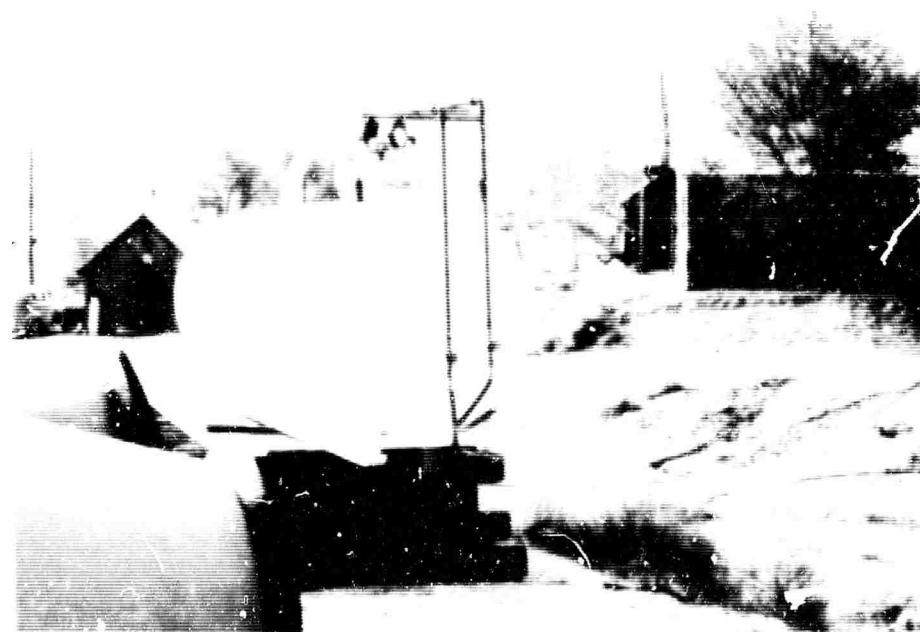


Photo No. 21-50 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

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Photo No. 21-51 - Preshot - October 8, 1963

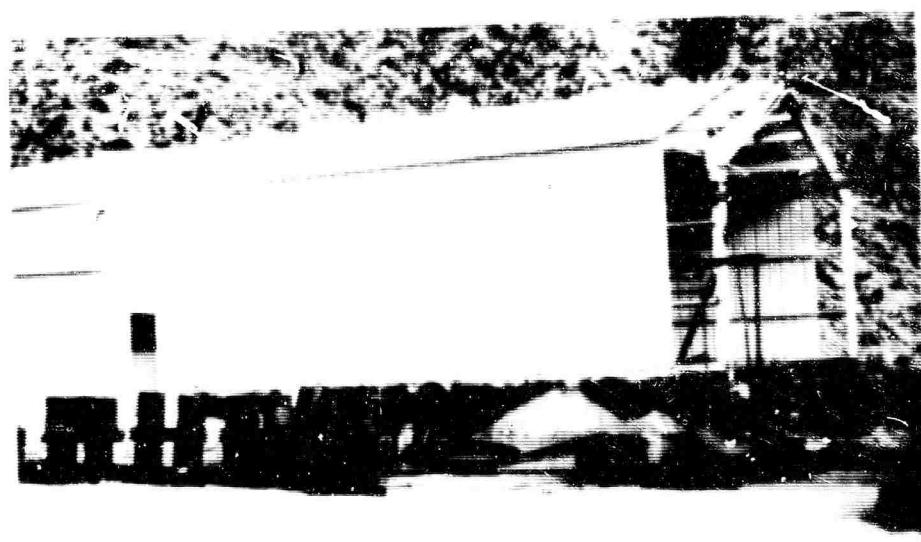


Photo No. 21-51 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

R-123

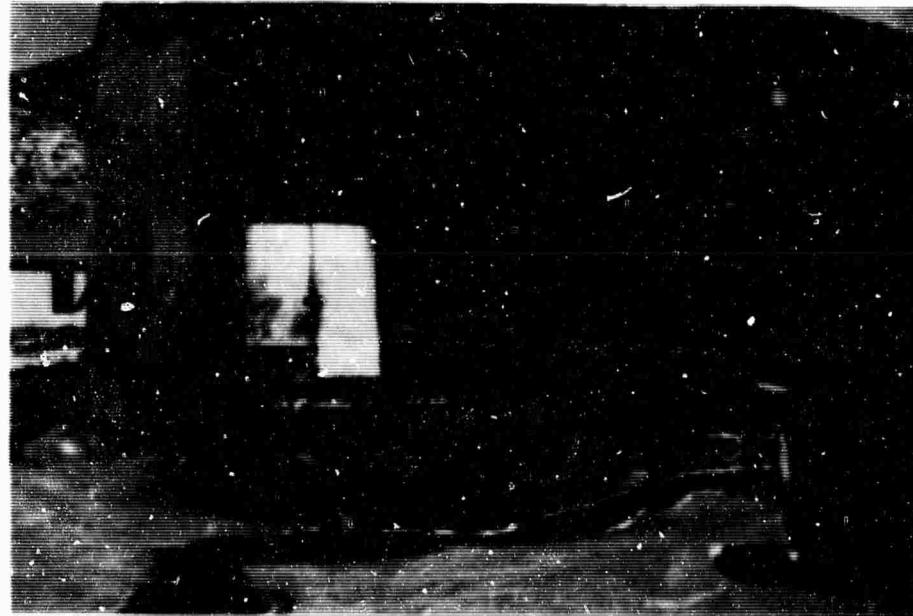


Photo No. 21-52 - Preshot - October 8, 1963



Photo No. 21-52 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

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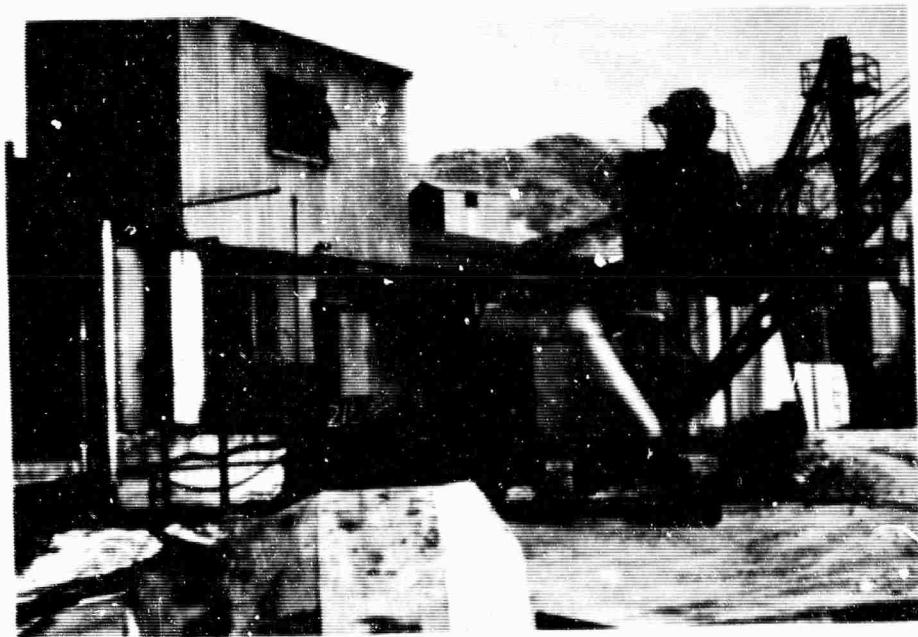


Photo No. 21-53 - Preshot - October 8, 1963

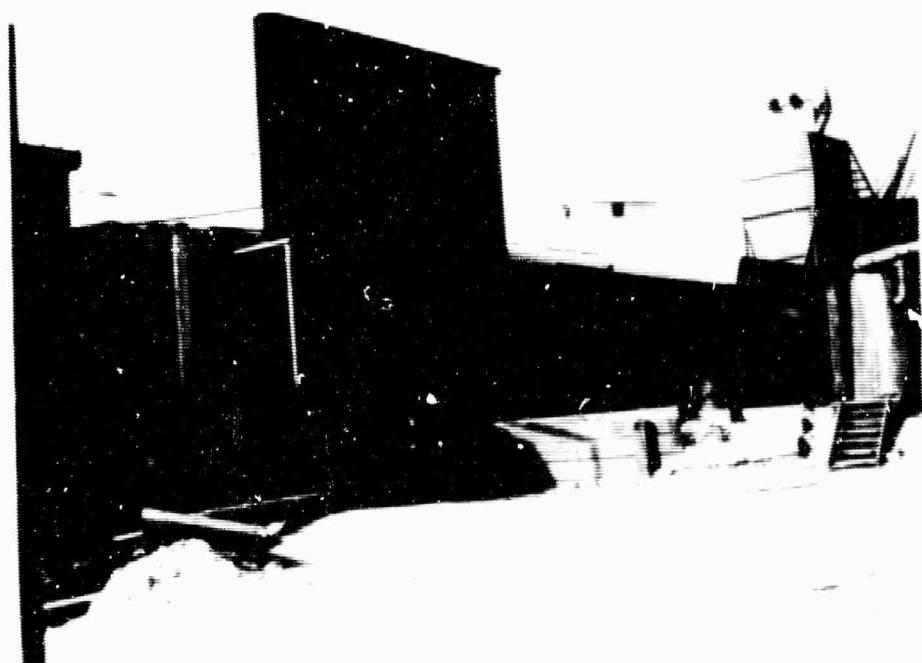


Photo No. 21-53 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

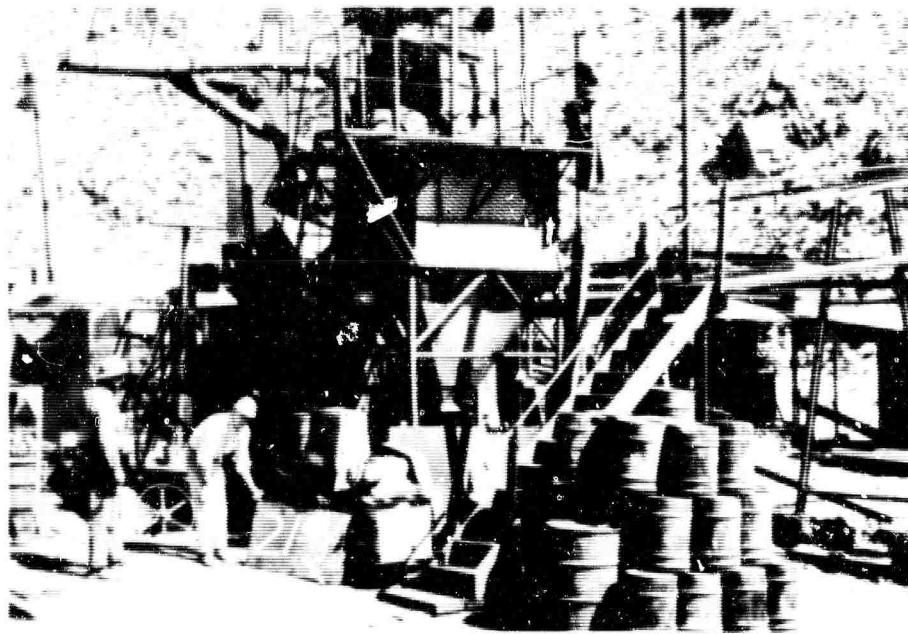


Photo No. 21-54 - Preshot October 2, 1963

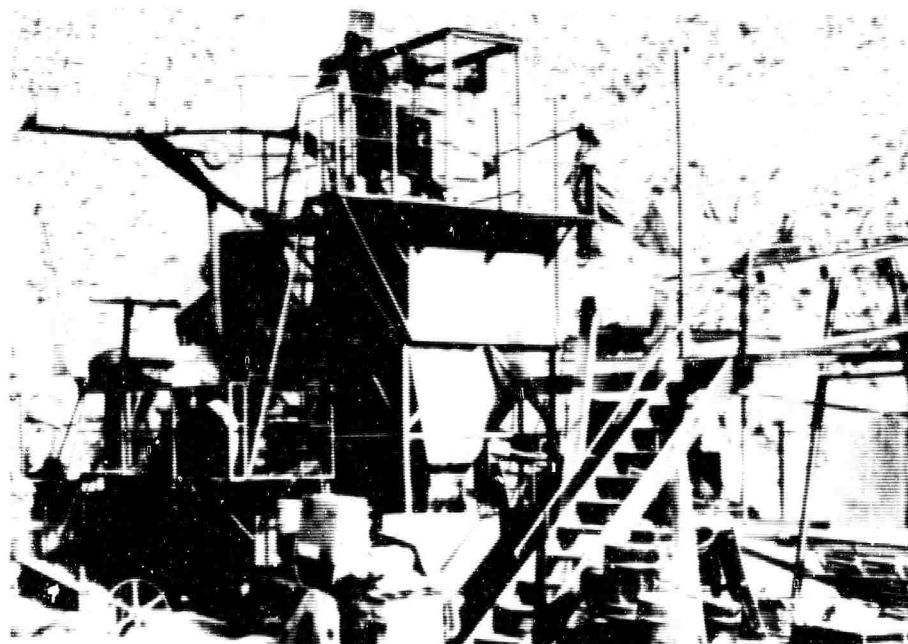


Photo No. 21-54 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

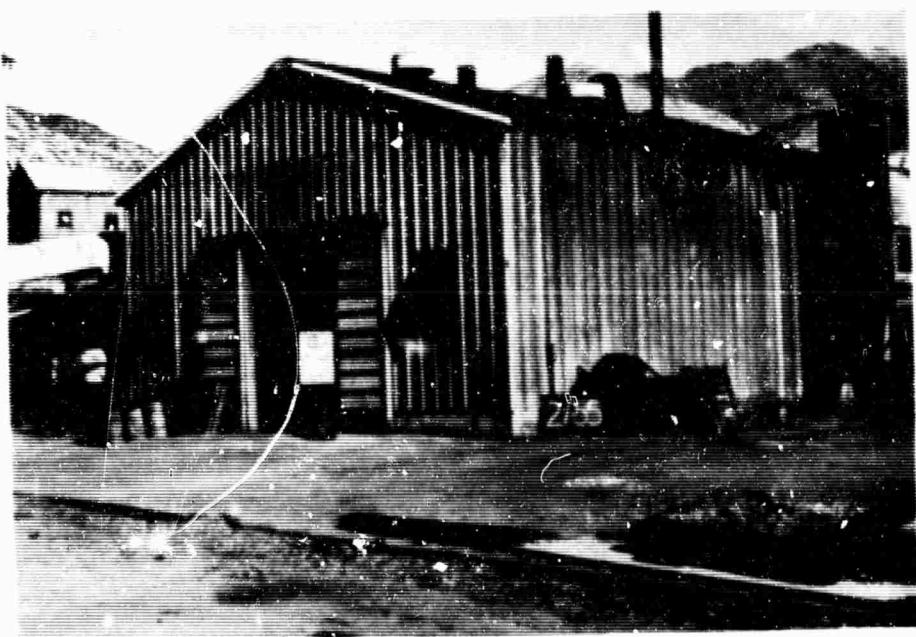


Photo No. 21-55 - Preshot - October 8, 1963

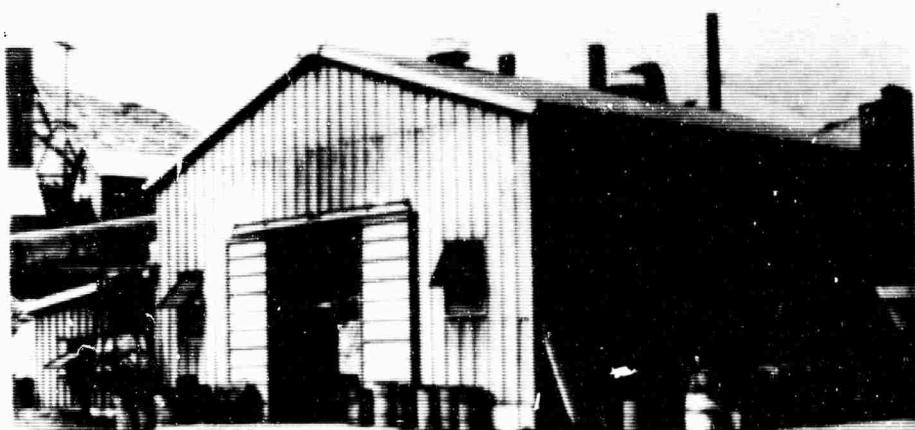


Photo No. 21-55 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

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Photo No. 21-56 - Preshot - October 8, 1963

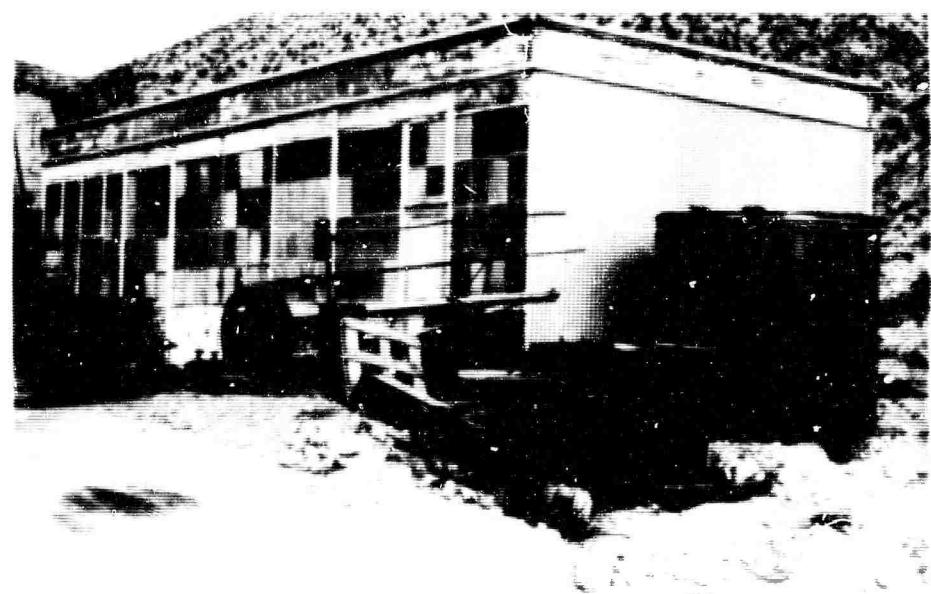


Photo No. 21-56 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

B-128

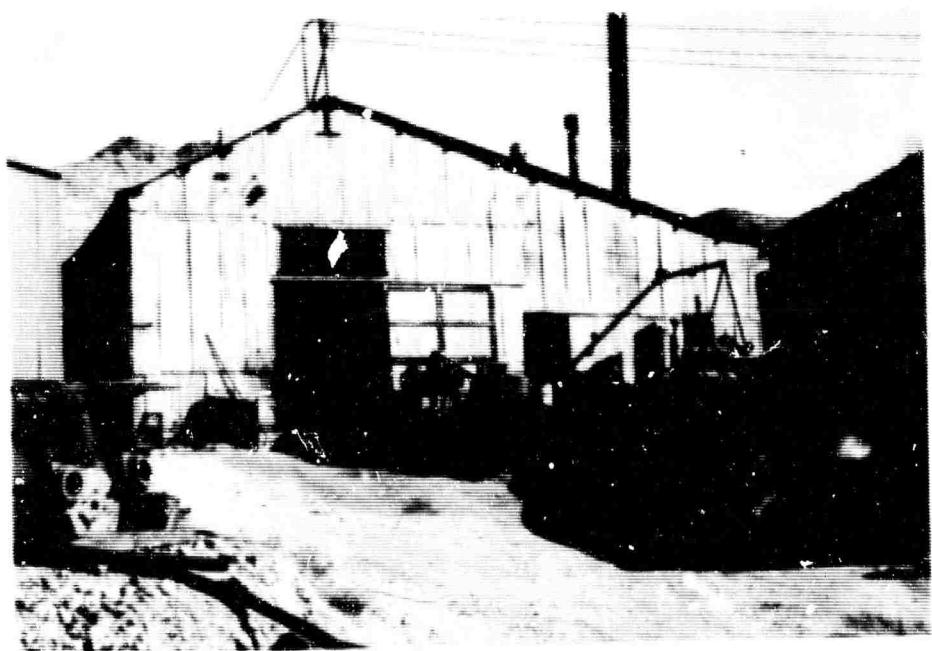


Photo No. 21-57 - Preshot - October 8, 1963

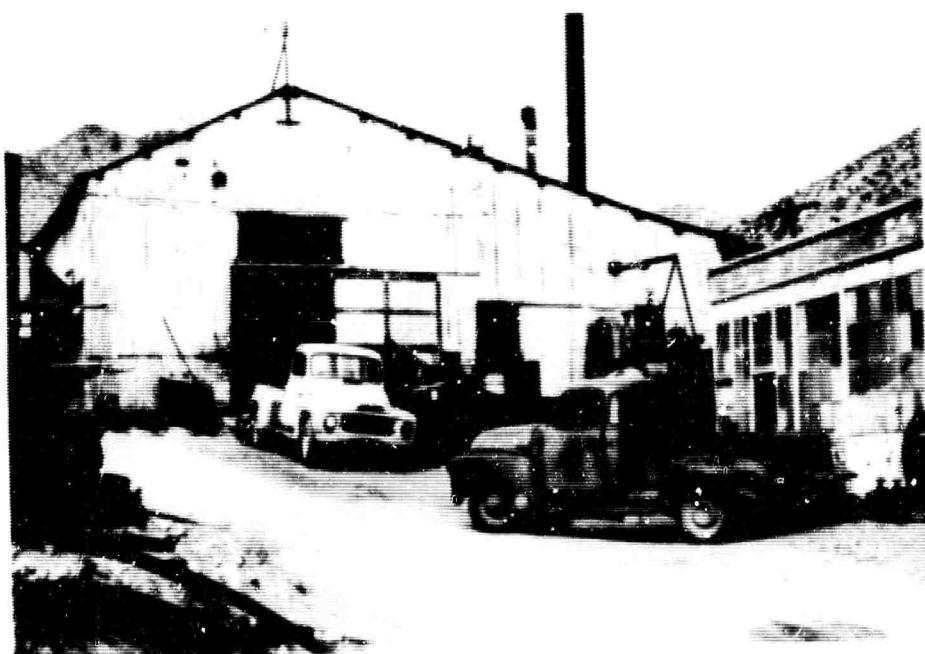


Photo No. 21-57 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

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Photo No. 21-58 - Preshot - October 8, 1963



Photo No. 21-58 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

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Photo No. 21-59 - Preshot - October 2, 1963



Photo No. 21-59 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

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Photo No. 21-60 - Preshot - October 2, 1963



Photo No. 21-60 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

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Photo No. 21-61 - Preshot - October 2, 1963

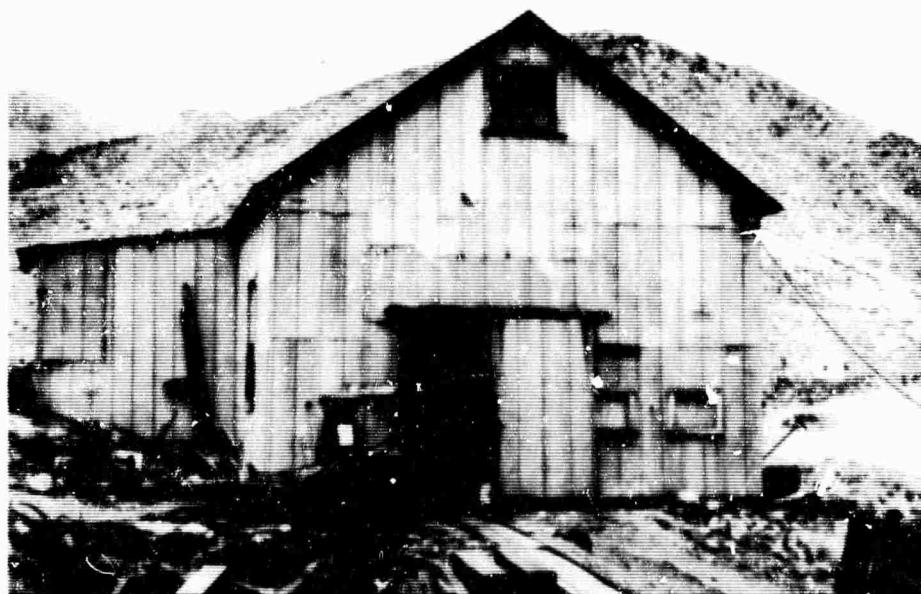


Photo No. 21-61 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

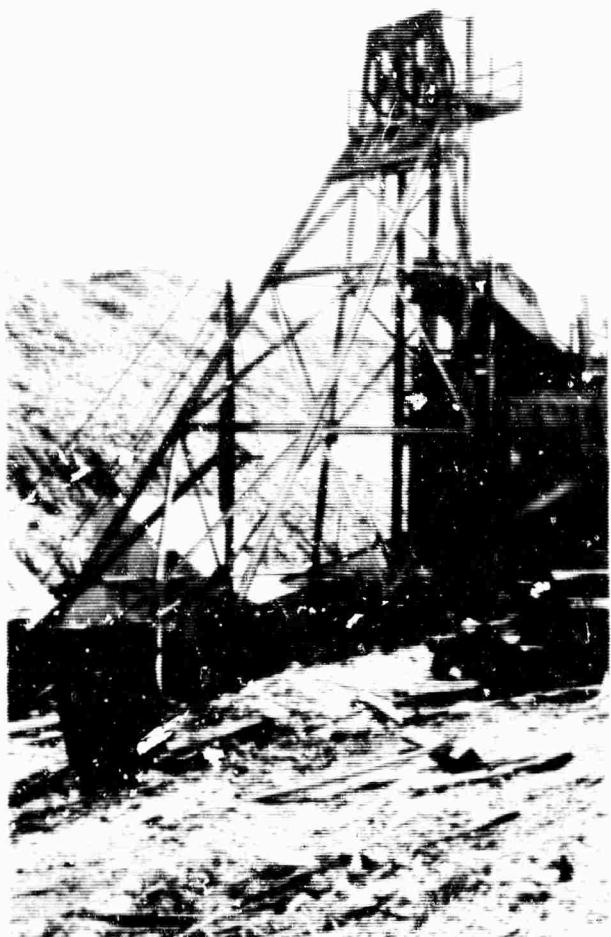


Photo No. 21-62

Preshot

October 2, 1963

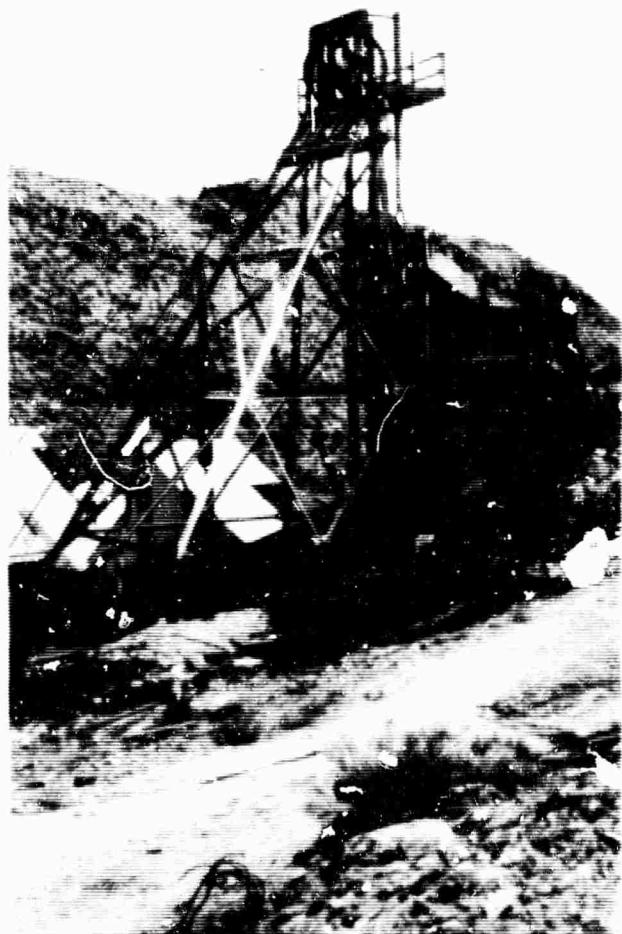


Photo No. 21-62

Posishot

October 28, 1963

NEVADA SCHEELITE MINE

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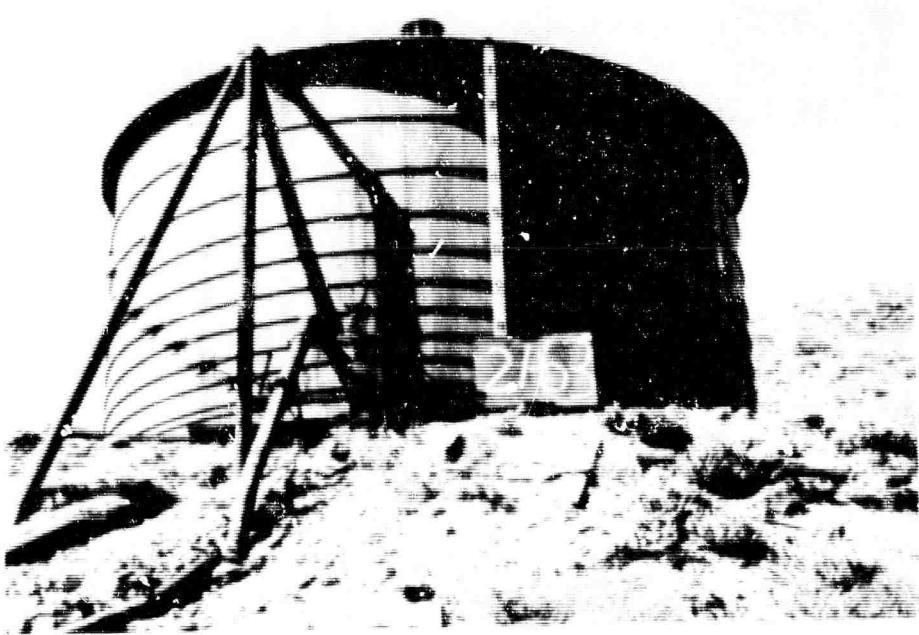


Photo No. 21-63 - Preshot - October 2, 1963

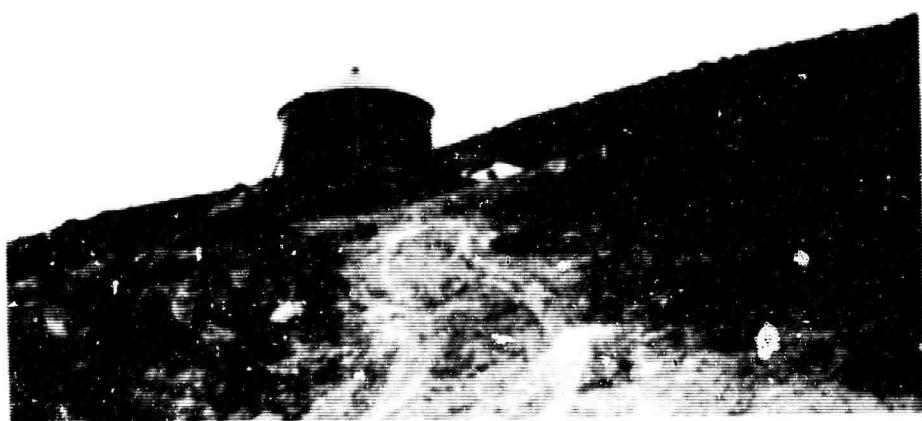


Photo No. 21-63 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

B-135

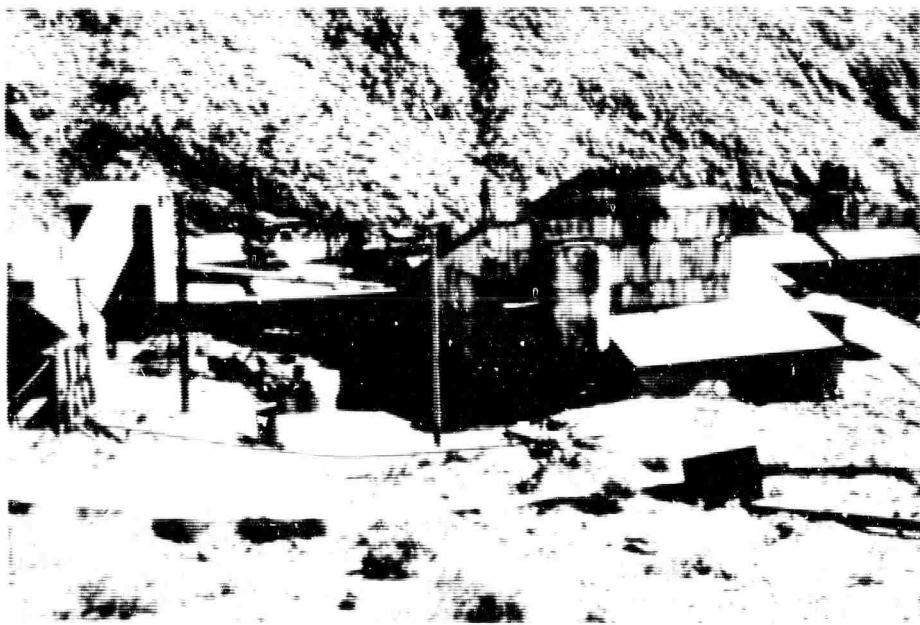


Photo No. 21-64 - Preshot - October 2, 1963



Photo No. 21-64 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

B-136

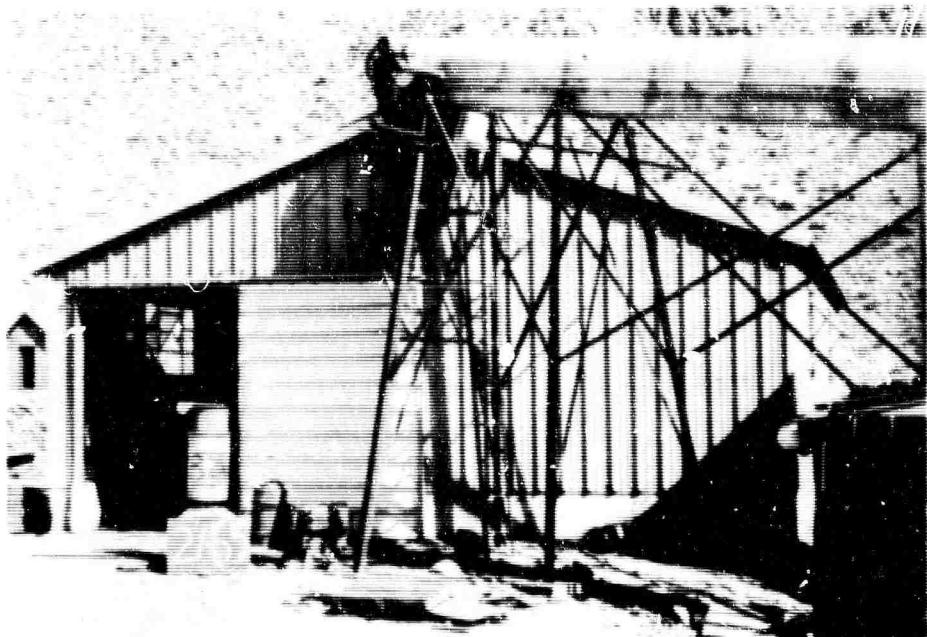


Photo No. 21-65 - Preshot - October 2, 1963



Photo No. 21-65 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE

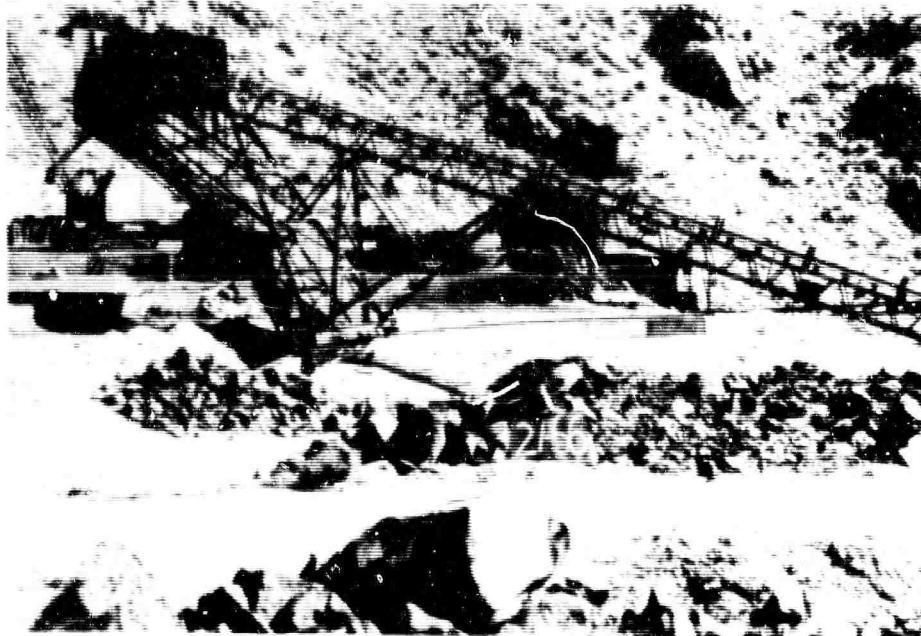


Photo No. 21-66 (1) - Preshot - October 2, 1963

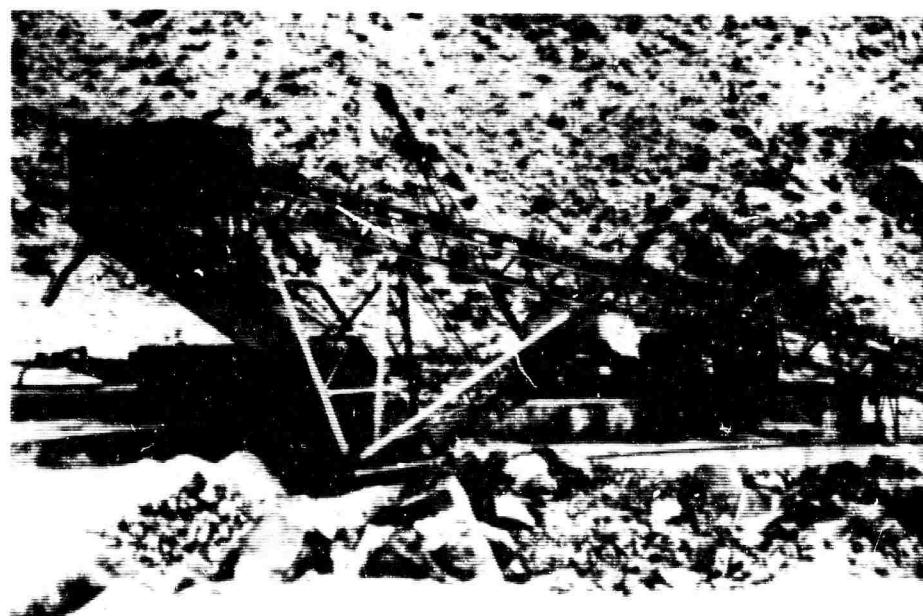


Photo No. 21-66 (1) - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-66 (2) - Preshot - October 2, 1963



Photo No. 21-66 (2) - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 21-67 - Preshot - October 2, 1963



Photo No. 21-67 - Postshot - October 28, 1963

NEVADA SCHEELITE MINE



Photo No. 22-1

Preshot

October 3, 1963



Photo No. 22-1

Postshot

October 31, 1963

BROKEN HILLS MINE

B - 141

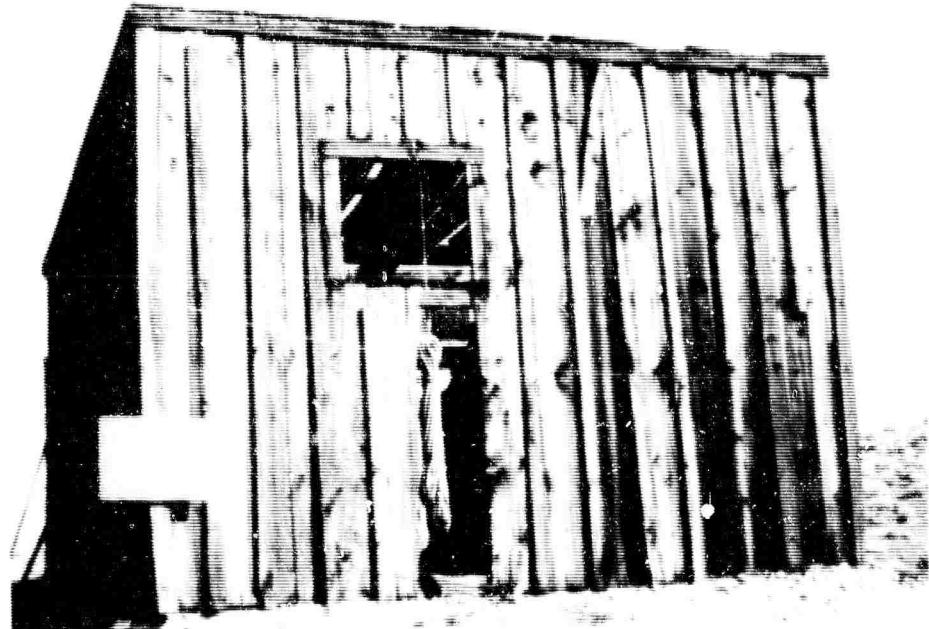


Photo No. 22-2 - Preshot - October 3, 1963



Photo No. 22-2 - Postshot - October 31, 1963

BROKEN HILLS MINE

B-142



Photo No. 22-3 - Preshot - October 3, 1963



Photo No. 22-3 - Postshot - October 31, 1963

BROKEN HILLS MINE

B-143

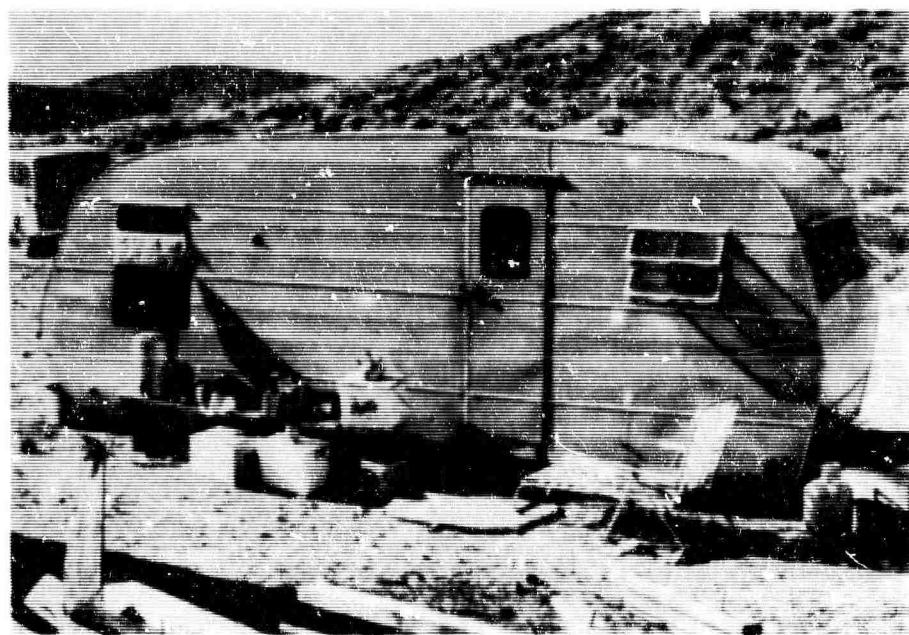


Photo No. 22-4 - Preshot - October 3, 1963

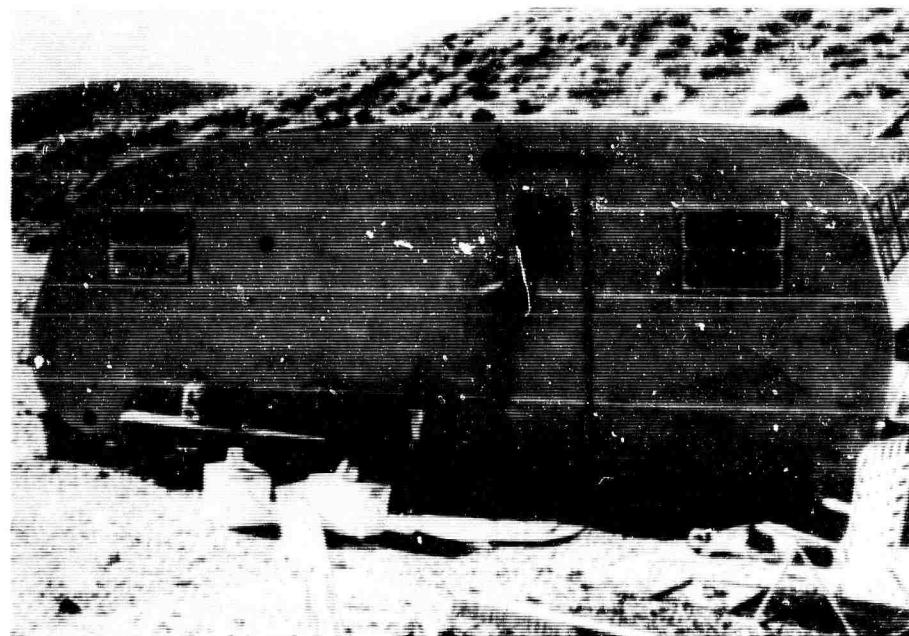


Photo No. 22-4 - Postshot - October 31, 1963

BROKEN HILLS MINE

B-144



Photo No. 22-5 - Preshot - October 3, 1963

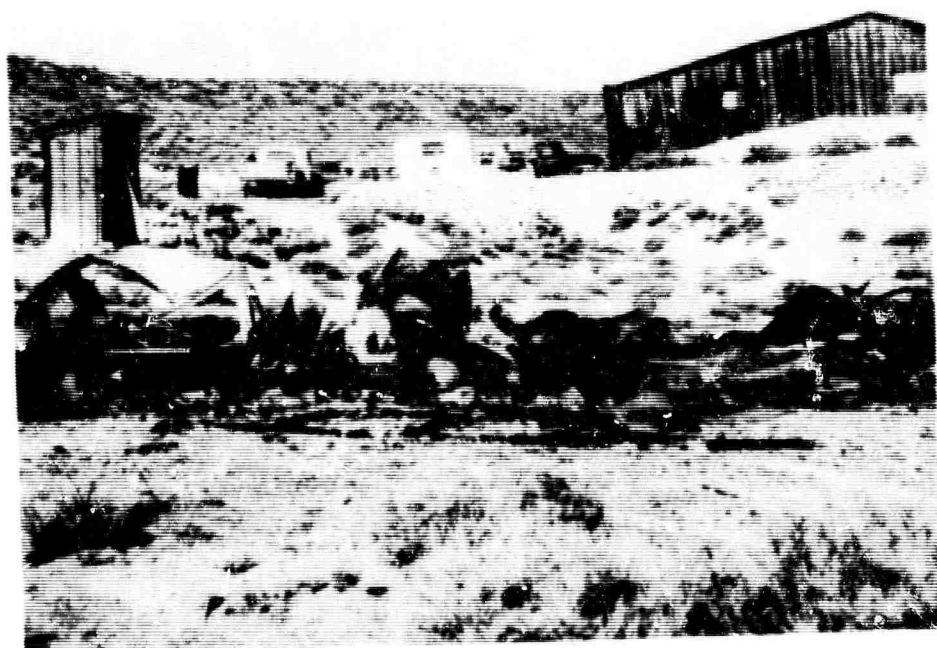


Photo No. 22-5 - Postshot - October 31, 1963

BROKEN HILLS MINE

B-145

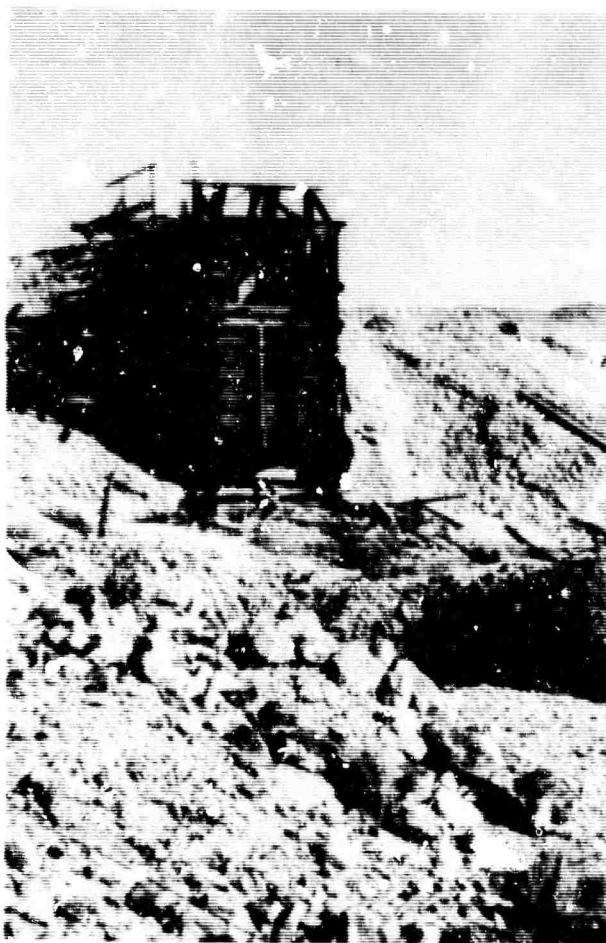


Photo No. 22-6

Preshot

October 3, 1963

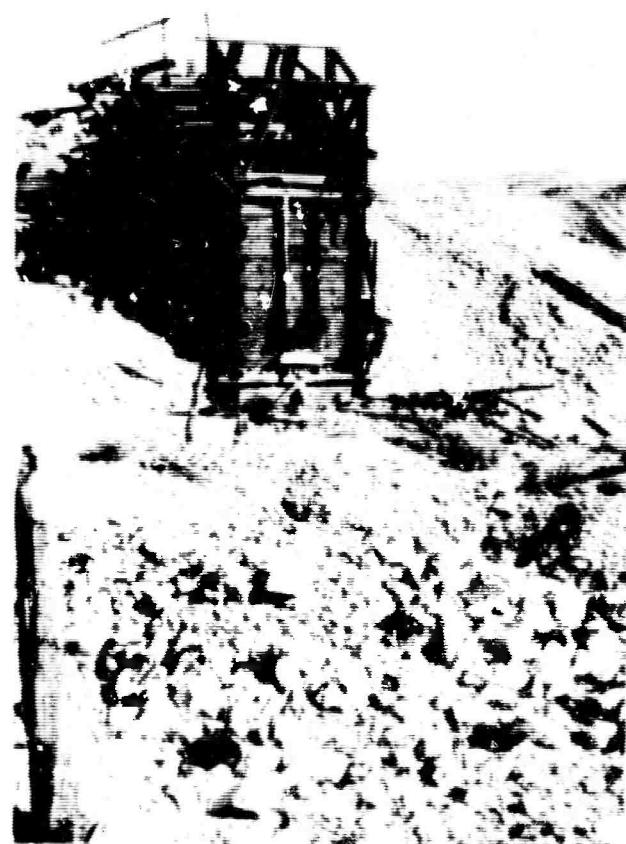


Photo No. 22-6

Postshot

October 31, 1963

BROKEN HILLS MINE

B-146



Photo No. 22-7

Preshot

October 3, 1963



Photo No. 22-7

Postshot

October 31, 1963

BROKEN HILLS MINE

B-147



Photo No. 22-8 - Preshot - October 3, 1963



Photo No. 22-8 - Postshot - October 31, 1963

BROKEN HILLS MINE

B-148

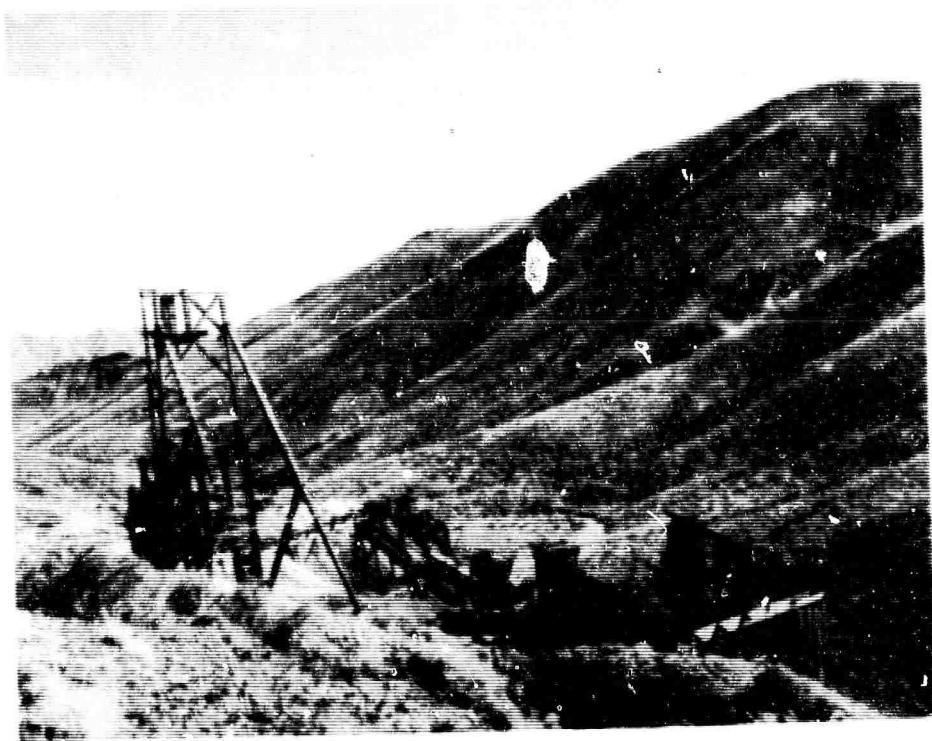


Photo No. 23-1 - Preshot - October 2, 1963



Photo No. 23-1 - Postshot - October 28, 1963

EAGLEVILLE MINE

B-149



Photo No. 23-2 - Preshot - October 2, 1963



Photo No. 23-2 - Postshot - October 28, 1963

EAGLEVILLE MINE

B-150



Photo No. 23-3 - Preshot - October 2, 1963



Photo No. 23-3 - Postshot - October 28, 1963

EAGLEVILLE MINE

B-151



Photo No. 23-4 - Preshot - October 2, 1963



Photo No. 23-4 - Postshot - October 28, 1963

EAGLEVILLE MINE

B-152



Photo No. 24-1 - Preshot - October 2, 1963

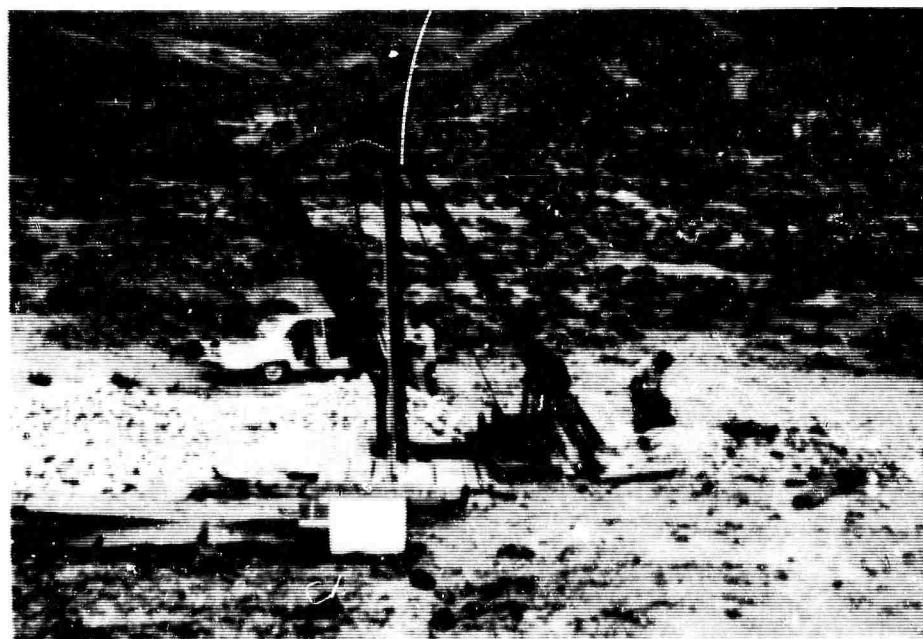


Photo No. 24-1 - Postshot - October 28, 1963

ROBINSON-SIMKIN ACE CLAIMS

B-153

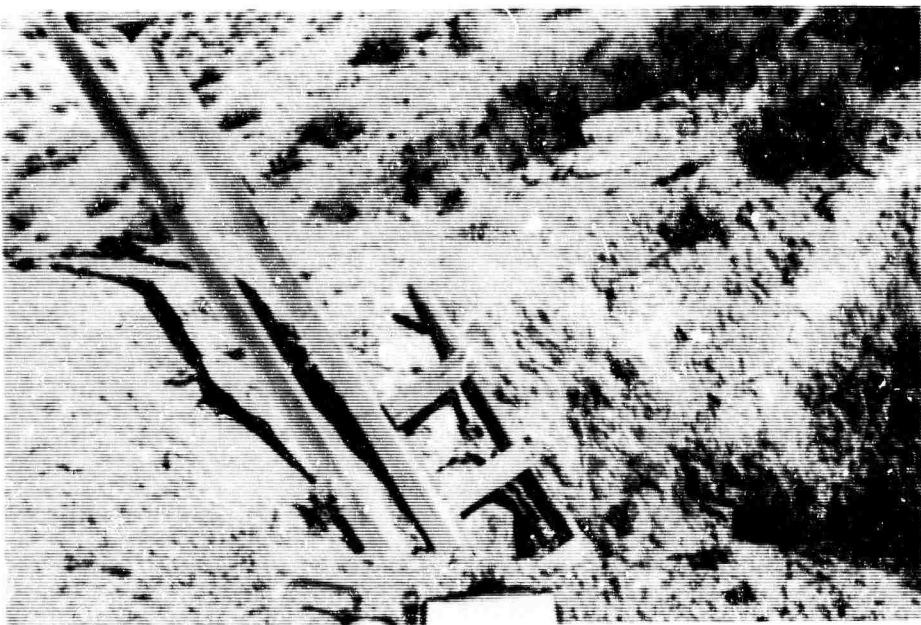


Photo No. 25-1 - Preshot - October 1, 1963

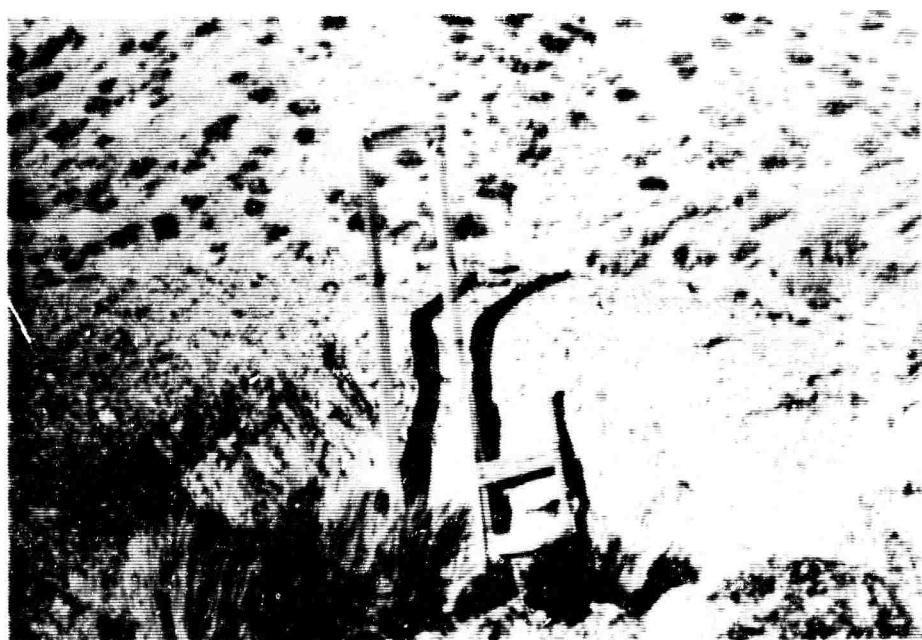


Photo No. 25-1 - Postshot - October 30, 1963

HAPPY RETURN MINE

B-154

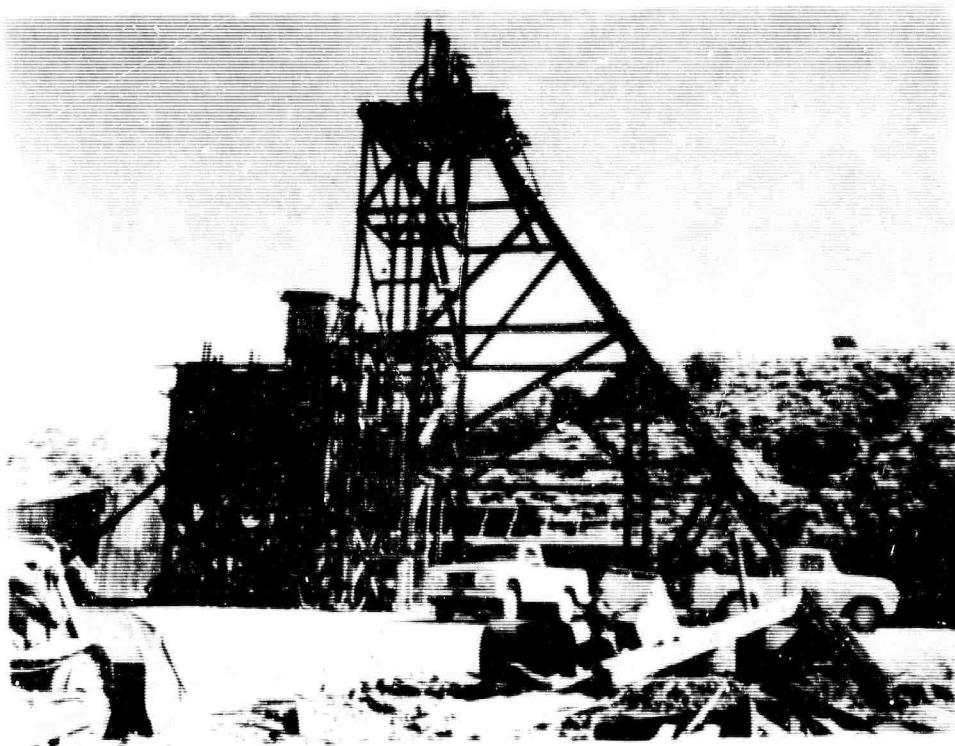


Photo No. 26-1 - Preshot - October 10, 1963

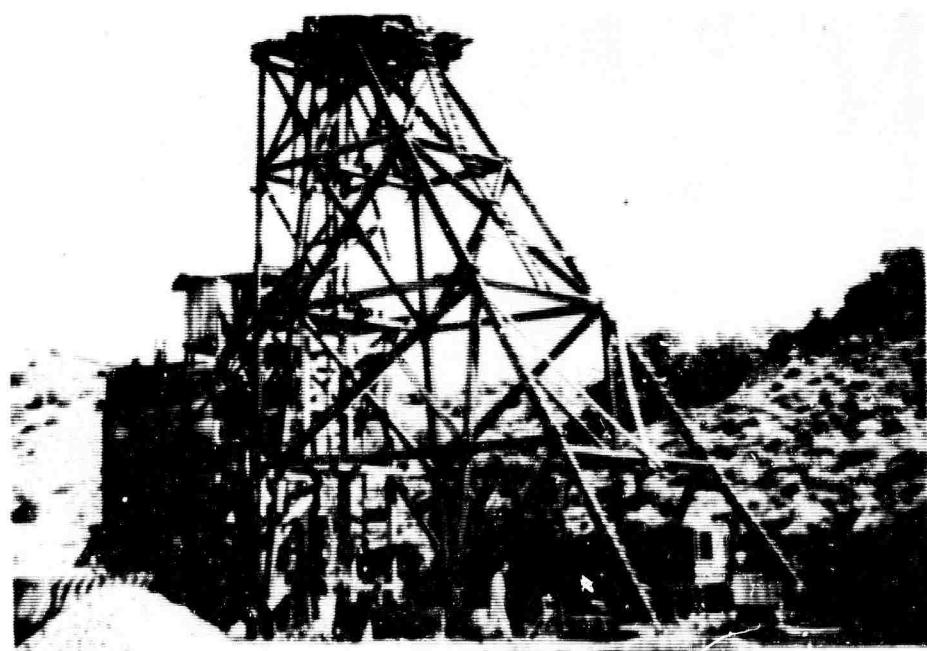


Photo No. 26-1 - Postshot - October 31, 1963

SIMON MINE

B-155

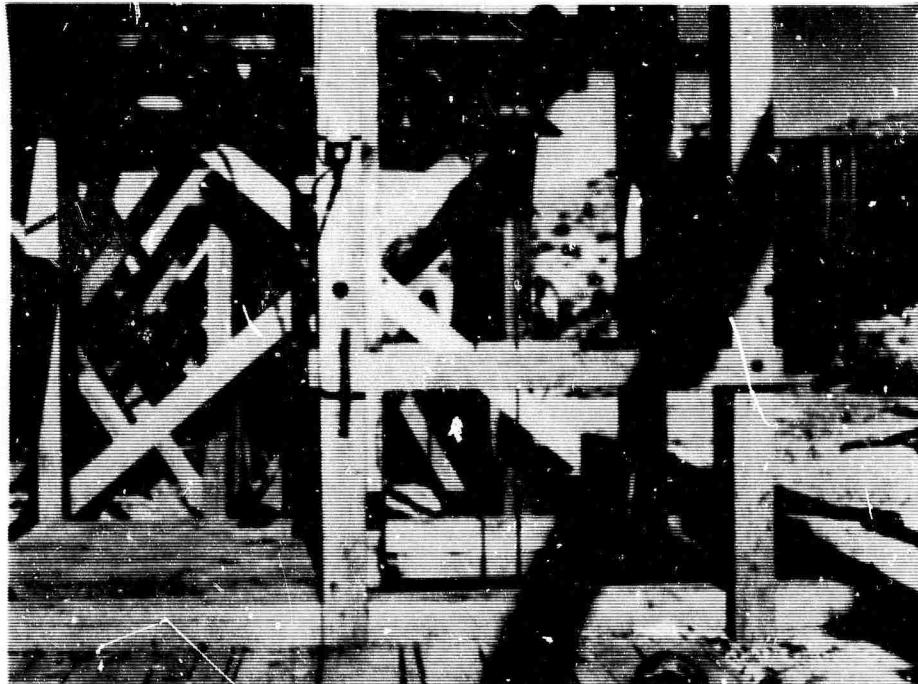


Photo No. 26-2 - Preshot - October 10, 1963

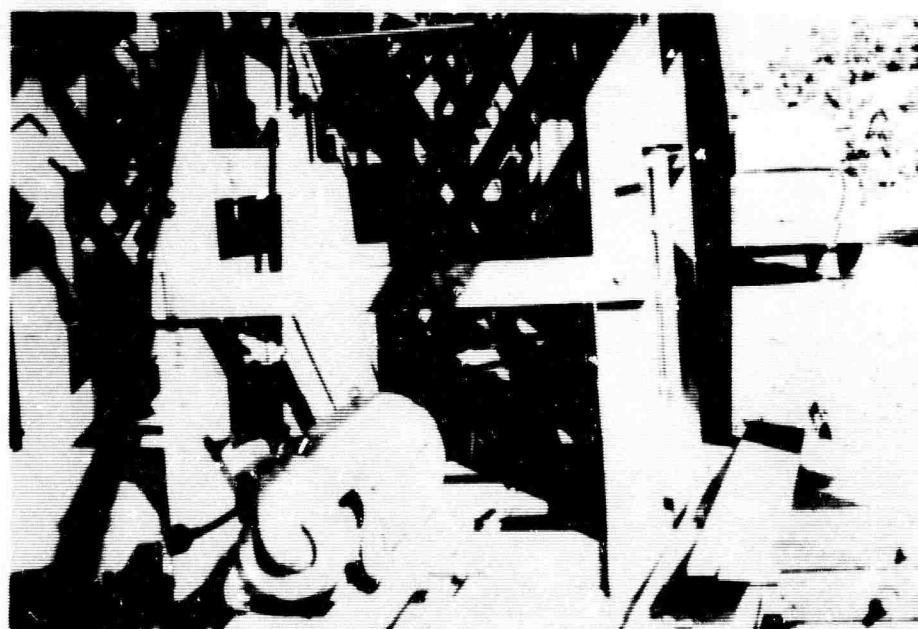


Photo No. 26-2 - Postshot - October 31, 1963

SIMON MINE

B-156



Photo No. 26-3 - Preshot - October 10, 1963

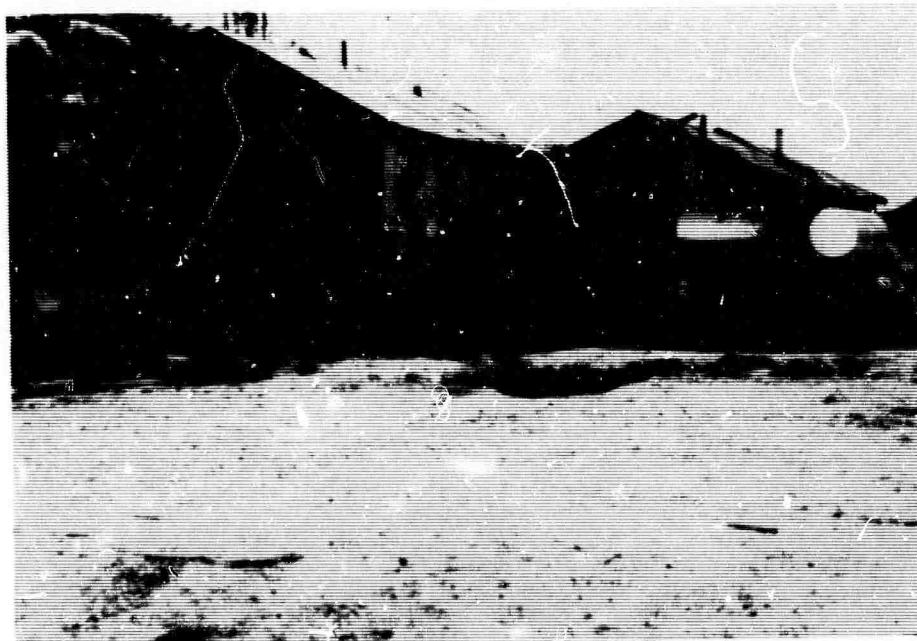


Photo No. 26-3 - Postshot - October 31, 1963

SIMON MINE

B-157



Photo No. 26-4 - Preshot - October 10, 1963



Photo No. 26-4 - Postshot - October 31, 1963

SIMON MINE

B-158



Photo No. 27-1 - Preshot - October 22, 1963

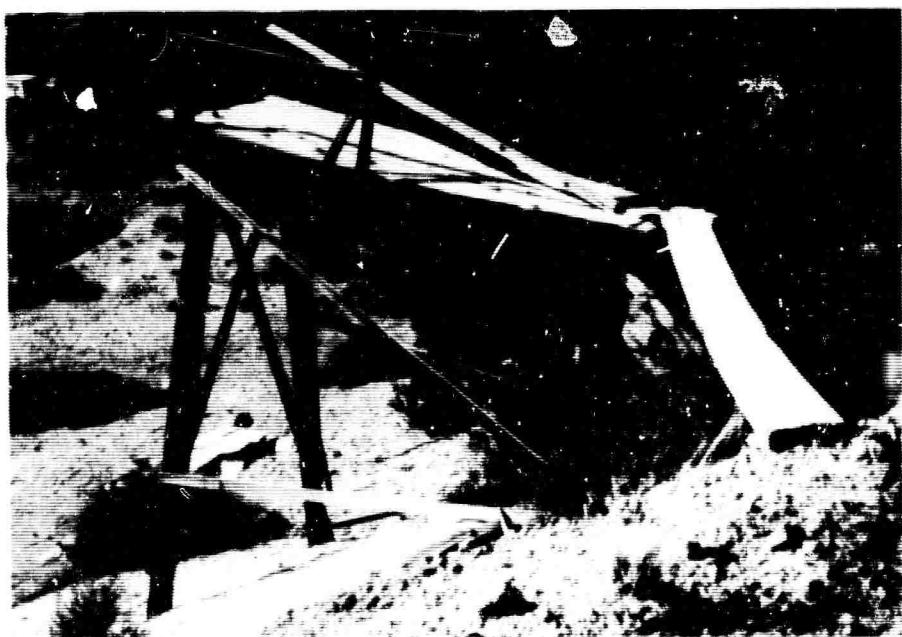


Photo No. 27-1 - Postshot - November 1, 1963

BUFFALO HUMP MINE

B-159

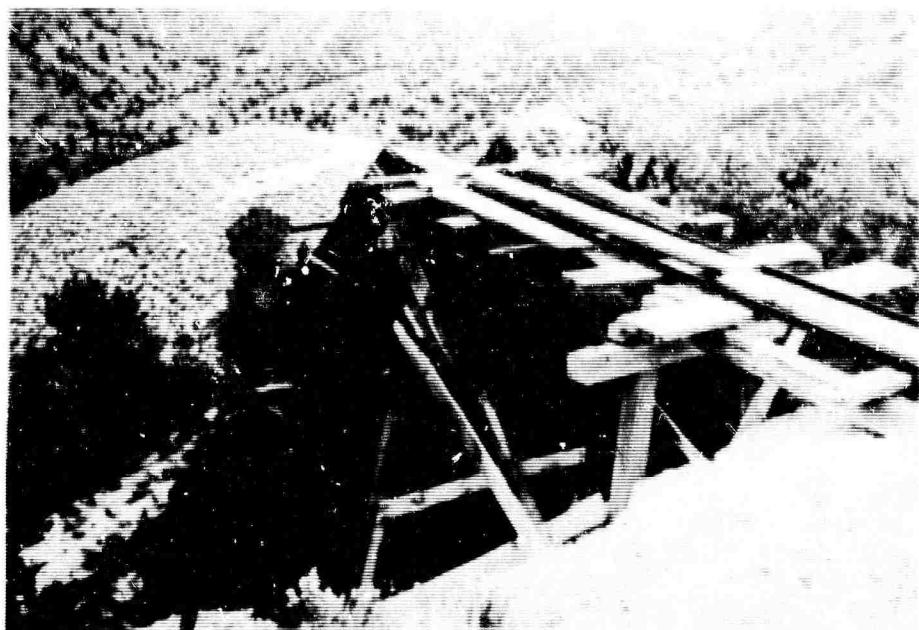


Photo No. 27-2 - Preshot - October 22, 1963

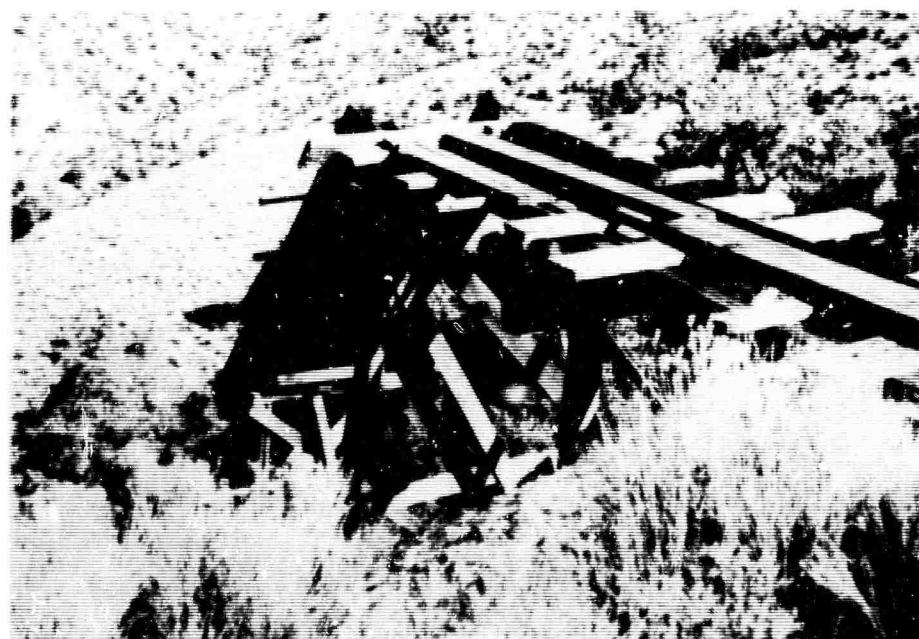


Photo No. 27-2 - Postshot - November 1, 1963

BUFFALO HUMP MINE

B-160

APPENDIX C

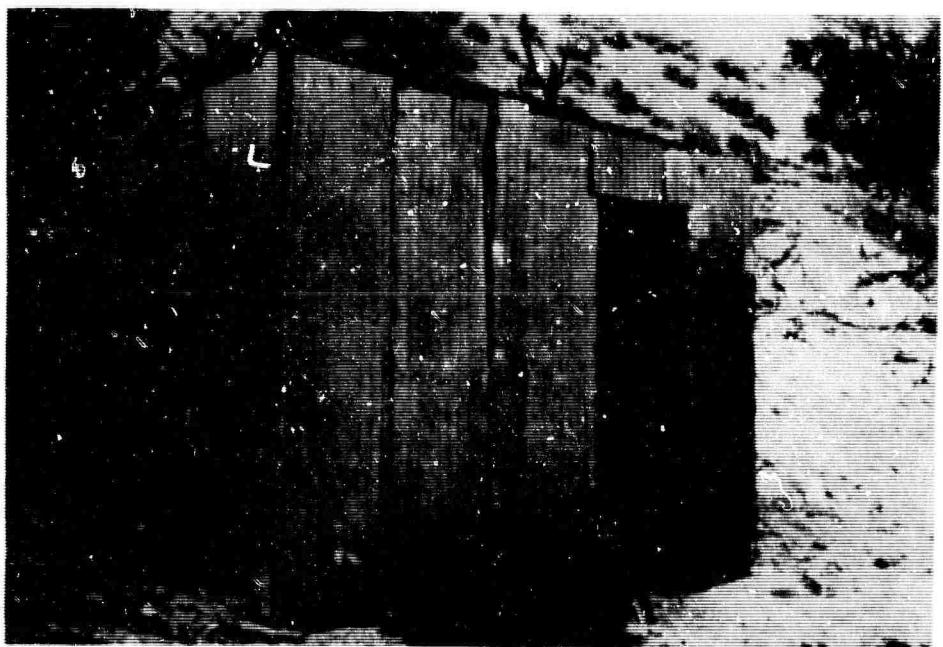


Photo No. 27-3 - Preshot - October 22, 1963

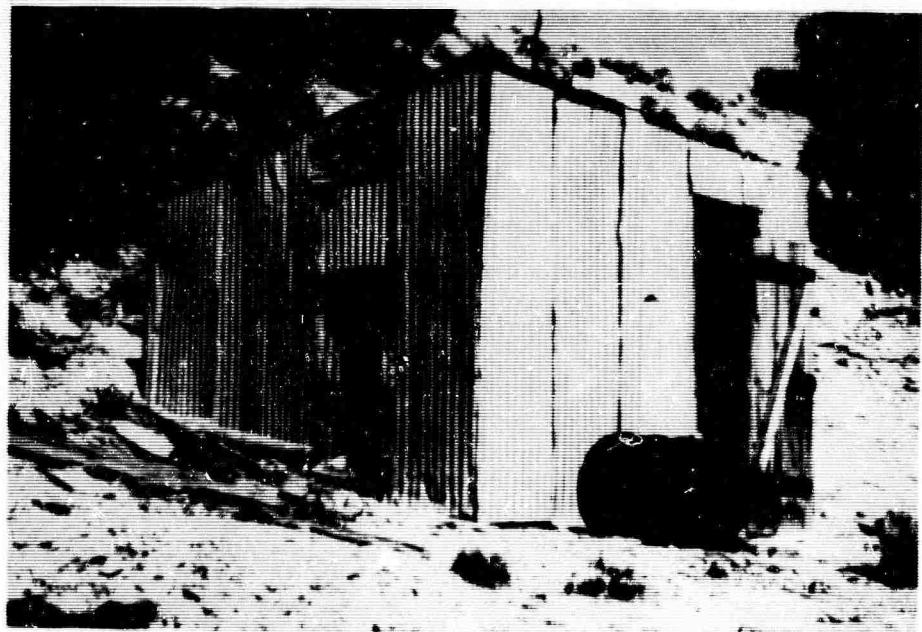
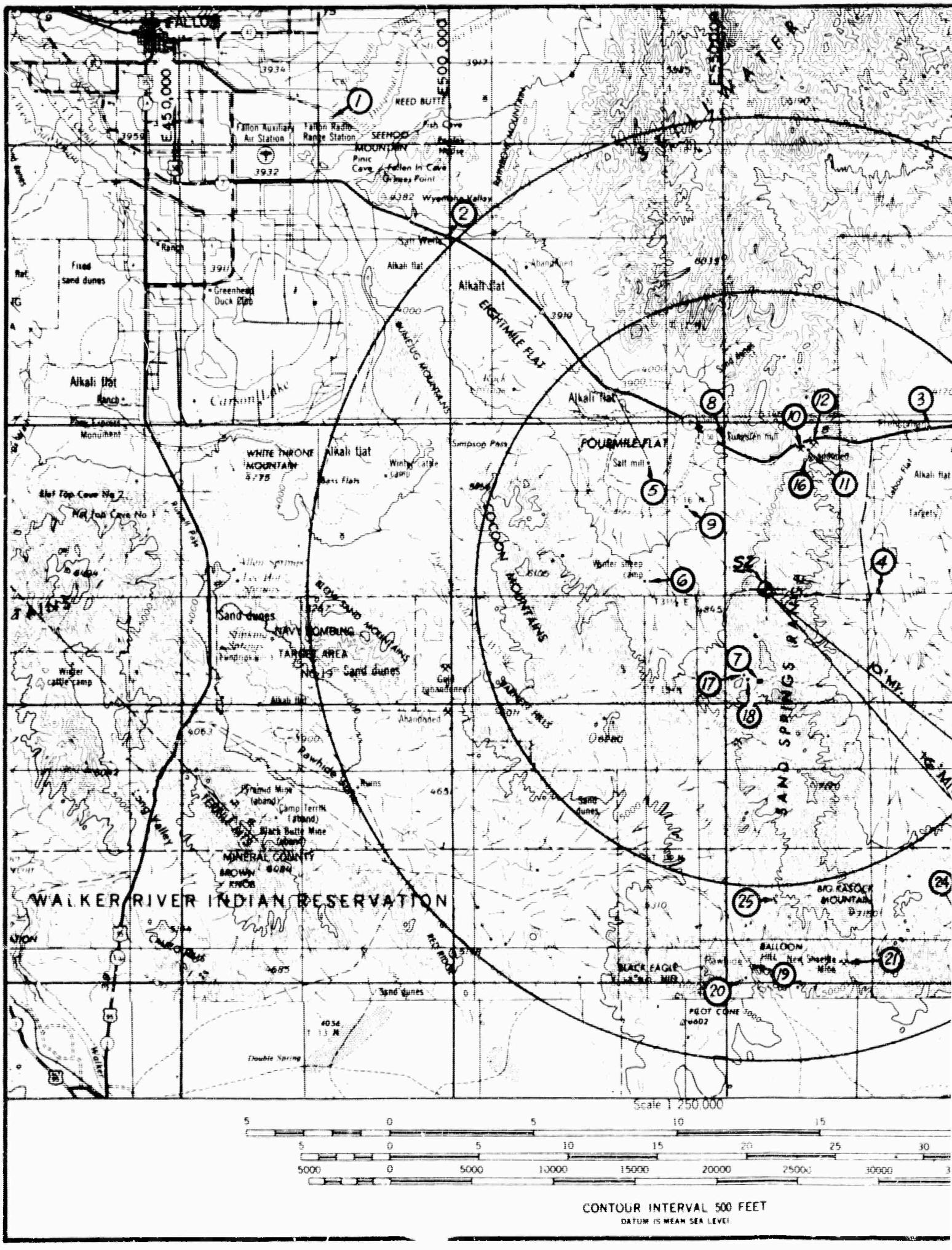


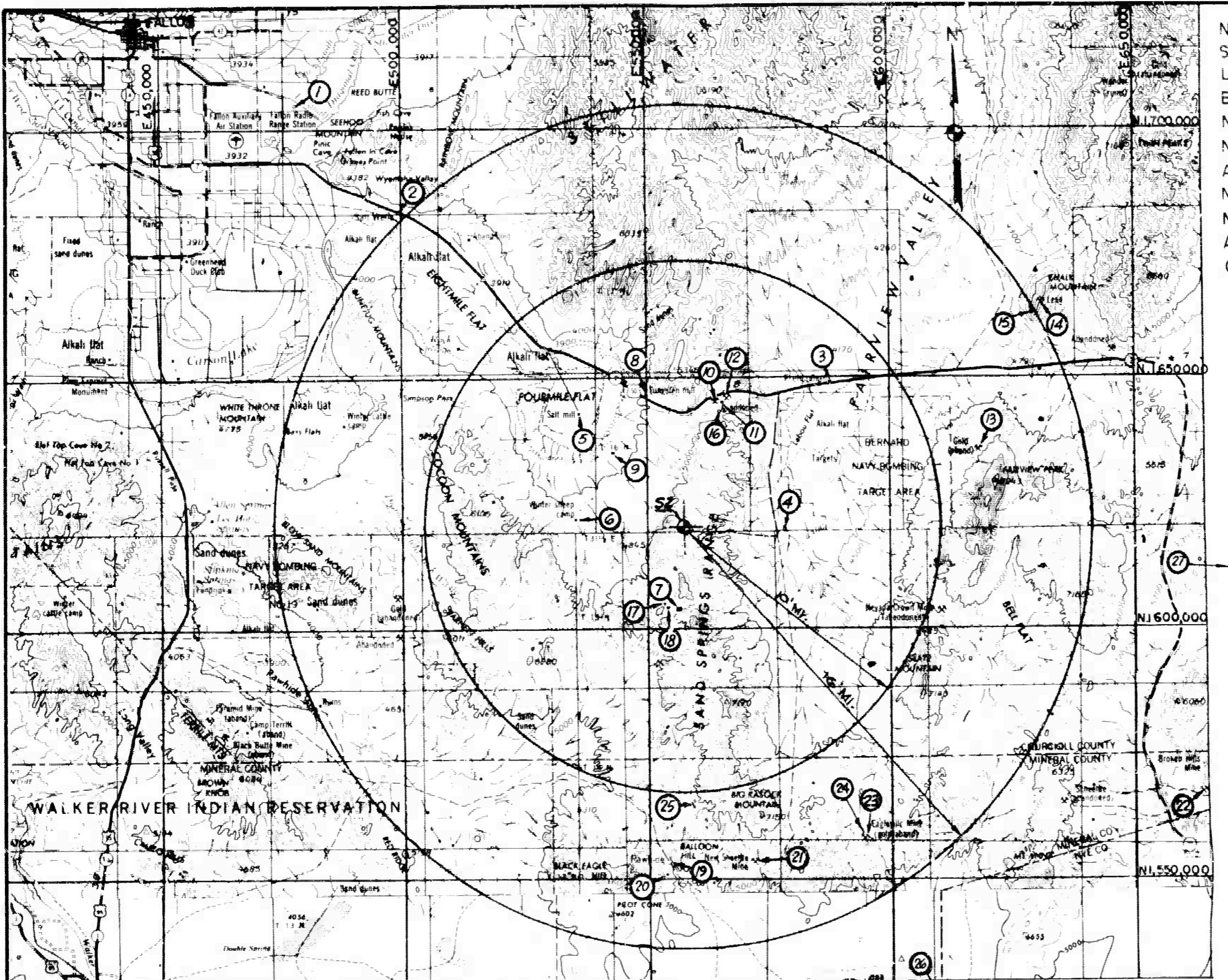
Photo No. 27-3 - Postshot - November 1, 1963

BUFFALO HUMP MINE

B-161

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NOTE:
SERIAL NOS. 26 AND 27 ARE NOT LOCATED HEREON, SINCE THEY ARE BEYOND THE LIMITS OF THE MAP.
NO. 26 IS LOCATED AT COORDINATES N. 1,390,000 / E. 703,500 AND APPROXIMATELY 52 MILES SE OF G.Z.
NO. 27 IS LOCATED AT COORDINATES N. 1,607,500 / E. 721,000 AND APPROXIMATELY 31 MILES EAST OF G.Z.

**PROJECT SHOAL
VICINITY MAP
FALLON, NEVADA**

HOLMES & MARVER, INC.

ENGINEERS-CONTRACTORS
ATOMIC TEST SUPPORT ORGANIZATION LAS VEGAS OFFICE
3030 S. HIGHLAND DRIVE LAS VEGAS, NEVADA

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**TECHNICAL REPORTS SCHEDULED FOR ISSUANCE BY AGENCIES PARTICIPATING IN
PROJECT SHOAL**

AEC REPORTS

<u>Agency</u>	<u>Report No.</u>	<u>Project No.</u>	<u>Subject or Title</u>
NBM	VUF-1001	33.2	Geological, Geophysical and Hydrological Investigations of the Sand Springs Range, Fairview Valley and Fourmile Flat, Churchill County, Nevada
SC	VUF-1002	40.5	Seismic Measurements at Sandia Stations
SC	VUF-1003	45.3	Hydrodynamic Yield Measurements
SC	VUF-1004	45.5	Device Support, Arming, Stemming and Yield Determination
SC	VUF-1005	45.6	Radiological Safety
EG&G	VUF-1006	60.4	Final Timing and Firing Report - Final Photo Report
USBM-PRC	*		Subsurface Fracturing From Shoal Nuclear Detonation
USWB	VUF-1008		Weather and Surface Radiation Prediction
USPHS	VUF-1009		Off-Site Surveillance
USBM	VUF-1010		Structural Survey of Private Mining Properties
USC&GS	VUF-1011		Seismic Safety Net
REECo	VUF-1012		On-Site Health and Safety Report

<u>Agee. /</u>	<u>Report No.</u>	<u>Project No.</u>	<u>Subject or Title</u>
RFB, Inc.	VUF-1013		Analysis of Shoal Data on Ground Motion and Containment
H-NSC	VUF-1014		Shoal Post-Shot Hydrologic Safety Report
H&N	VUF-1015		Pre-Shot and Post-Shot Structure Survey
H&N	VUF-1016		Test of Dribble-Type Structures
FAA	VUF-1017		Federal Aviation Agency Airspace Advisory
		<u>DOD REPORTS</u>	
SC	VUF-2001	1.1	Free Field Earth Motions and Spalling Measurements in Granite
SC	VUF-2002	1.2	Surface Motion Measurements Near Surface
** USCGS	VUF-2300	1.4	Strong Motion Seismic Measurements
LPI	VUF-2600	1.6	In-Situ Stress in Granite
** STL	VUF-2400	1.7	Shock Spectrum Measurements
SRI	VUF-3001	7.5	Investigation of Visual and Photographic On-Site Techniques
SRI	VUF-3002	7.6	Local Seismic Monitoring - Vela CLOUD GAP Program

TI	VUF-3003	7.8	Surface and Subsurface Radiation Studies
USGS	VUF-3004	7.9	Physical and Chemical Effects of the Shoal Event
ITEK	VUF-3005	7.10	Airborne Spectral Reconnaissance
BR Ltd.	VUF-3006	7.15	The Mercury Method of Identification and Location of Underground Nuclear Sites
NRDL	VUF-3007	7.16	Multi-Sensor Aerial Reconnaissance of an Underground Nuclear Detonation
GIMRADA	VUF-3008	7.17	Stereophotogrammetric Techniques for On-Site Inspection
ISOTOPES	VUF-3009	7.19	Detection in Surface Air of Gaseous Radionuclides from the Shoal Underground Detonation
*** USC&GS		8.1	Microearthquake Monitoring at the Shoal Site
*** GEO-TECH		8.4	Long-Range Seismic Measurements

* This is a Technical Report to be issued as FNE-3001 which will receive TID-4500 category UC-35 Distribution "Nuclear Explosions-Peaceful Applications"

** Project Shoal results are combined with other events, therefore, this report will not be printed or distributed by DRIE

*** Report dated March 1964 has been published and distributed by USC&GS

**** Report dated December 9, 1963, DATDC Report 92, has been published and distributed by UED

LIST OF ABBREVIATIONS FOR TECHNICAL AGENCIES

BR Ltd.	Barringer Research Limited Rexdale, Ontario, Canada
EG&G	Edgerton, Germeshausen & Grier, Inc. Boston, Massachusetts Las Vegas, Nevada Santa Barbara, California
FAA	Federal Aviation Agency Los Angeles, California
GEO-TECH	Geo Technical Corporation Garland, Texas
GIMRADA	U. S. Army Geodesy, Intelligence and Mapping Research and Development Agency Fort Belvoir, Virginia
H-NSC	Hazleton-Nuclear Science Corporation Palo Alto, California
H&N, Inc.	Holmes & Narver, Inc. Los Angeles, California Las Vegas, Nevada
ISOTOPES	Isotopes, Inc. Westwood, New Jersey
ITEK	ITEK Corporation Palo Alto, California
LPI	Lucius Pitkin, Inc. New York, New York
NBM	Nevada Bureau of Mines University of Nevada, Reno, Nevada
NRDL	U. S. Naval Radiological Defense Laboratory San Francisco, California
REECo	Reynolds Electrical & Engineering Co., Inc. Las Vegas, Nevada
SC	Sandia Corporation Albuquerque, New Mexico
SRI	Stanford Research Institute Menlo Park, California

RFB, Inc.	R. F. Peers, Inc. Alexandria, Va.
STL	Space Technology Laboratories, Inc. Redondo Beach Park, California
TI	Texas Instruments, Inc. Dallas, Texas
USBM	U. S. Bureau of Mines Washington, 25, D. C.
USBM-PRC	U. S. Bureau of Mines Bartlesville Petroleum Research Center Bartlesville, Oklahoma
USC&GS	U. S. Coast and Geodetic Survey Las Vegas, Nevada
USGS	U. S. Geologic Survey Denver, Colorado
USPHS	U. S. Public Health Service Las Vegas, Nevada
USWB	U. S. Weather Bureau Las Vegas, Nevada